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Chen, Taiping

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<151> 1999-06-25

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<211> 4145

<212> DNA

<213> Homo sapiens

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<211> 908

<212> PRT

<213> Mus musculus

<400> 5

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Glu Glu Arg Gln Glu Pro Ser Ala Thr Ala Arg Lys Val Gly Arg Pro
35 40 45

Gly Arg Lys Arg Lys His Pro Pro Val Glu Ser Ser Asp Thr Pro Lys
50 55 60

Asp Pro Ala Val Thr Thr Lys Ser Gln Pro Met Ala Gln Asp Ser Gly
65 70 75 80

Pro Ser Asp Leu Leu Pro Asn Gly Asp Leu Glu Lys Arg Ser Glu Pro
85 90 95

Gln Pro Glu Glu Gly Ser Pro Ala Ala Gly Gln Lys Gly Gly Ala Pro
100 105 110

Ala Glu Gly Glu Gly Thr Glu Thr Pro Pro Glu Ala Ser Arg Ala Val
115 120 125

Glu Asn Gly Cys Cys Val Thr Lys Glu Gly Arg Gly Ala Ser Ala Gly
130 135 140

Glu Gly Lys Glu Gln Lys Gln Thr Asn Ile Glu Ser Met Lys Met Glu
145 150 155 160

Gly Ser Arg Gly Arg Leu Arg Gly Gly Leu Gly Trp Glu Ser Ser Leu
165 170 175

Arg Gln Arg Pro Met Pro Arg Leu Thr Phe Gln Ala Gly Asp Pro Tyr
180 185 190

Tyr Ile Ser Lys Arg Lys Arg Asp Glu Trp Leu Ala Arg Trp Lys Arg
195 200 205

Glu	Ala	Glu	Lys	Lys	Ala	Lys	Val	Ile	Ala	Val	Met	Asn	Ala	Val	Glu
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Glu	Asn	Gln	Ala	Ser	Gly	Glu	Ser	Gln	Lys	Val	Glu	Glu	Ala	Ser	Pro
225					230					235				240	
Pro	Ala	Val	Gln	Gln	Pro	Thr	Asp	Pro	Ala	Ser	Pro	Thr	Val	Ala	Thr
			245						250					255	
Thr	Pro	Glu	Pro	Val	Gly	Gly	Asp	Ala	Gly	Asp	Lys	Asn	Ala	Thr	Lys
		260						265					270		
Ala	Ala	Asp	Asp	Glu	Pro	Glu	Tyr	Glu	Asp	Gly	Arg	Gly	Phe	Gly	Ile
	275						280						285		
Gly	Glu	Leu	Val	Trp	Gly	Lys	Leu	Arg	Gly	Phe	Ser	Trp	Trp	Pro	Gly
290						295					300				
Arg	Ile	Val	Ser	Trp	Trp	Met	Thr	Gly	Arg	Ser	Arg	Ala	Ala	Glu	Gly
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Thr	Arg	Trp	Val	Met	Trp	Phe	Gly	Asp	Gly	Lys	Phe	Ser	Val	Val	Cys
			325						330					335	
Val	Glu	Lys	Leu	Met	Pro	Leu	Ser	Ser	Phe	Cys	Ser	Ala	Phe	His	Gln
		340						345					350		
Ala	Thr	Tyr	Asn	Lys	Gln	Pro	Met	Tyr	Arg	Lys	Ala	Ile	Tyr	Glu	Val
	355						360					365			
Leu	Gln	Val	Ala	Ser	Ser	Arg	Ala	Gly	Lys	Leu	Phe	Pro	Ala	Cys	His
370						375					380				
Asp	Ser	Asp	Glu	Ser	Asp	Ser	Gly	Lys	Ala	Val	Glu	Val	Gln	Asn	Lys
385					390					395				400	
Gln	Met	Ile	Glu	Trp	Ala	Leu	Gly	Gly	Phe	Gln	Pro	Ser	Gly	Pro	Lys
			405						410					415	
Gly	Leu	Glu	Pro	Pro	Glu	Glu	Glu	Lys	Asn	Pro	Tyr	Lys	Glu	Val	Tyr
		420						425					430		
Thr	Asp	Met	Trp	Val	Glu	Pro	Glu	Ala	Ala	Ala	Tyr	Ala	Pro	Pro	Pro

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Pro Ala Lys Lys Pro Arg Lys Ser Thr Thr Glu Lys Pro Lys Val Lys				
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Glu Ile Ile Asp Glu Arg Thr Arg Glu Arg Leu Val Tyr Glu Val Arg				
465		470		475 480
Gln Lys Cys Arg Asn Ile Glu Asp Ile Cys Ile Ser Cys Gly Ser Leu				
	485		490	495
Asn Val Thr Leu Glu His Pro Leu Phe Ile Gly Gly Met Cys Gln Asn				
	500		505	510
Cys Lys Asn Cys Phe Leu Glu Cys Ala Tyr Gln Tyr Asp Asp Asp Gly				
	515		520	525
Tyr Gln Ser Tyr Cys Thr Ile Cys Cys Gly Gly Arg Glu Val Leu Met				
	530		535	540
Cys Gly Asn Asn Asn Cys Cys Arg Cys Phe Cys Val Glu Cys Val Asp				
545		550		555 560
Leu Leu Val Gly Pro Gly Ala Ala Gln Ala Ala Ile Lys Glu Asp Pro				
	565		570	575
Trp Asn Cys Tyr Met Cys Gly His Lys Gly Thr Tyr Gly Leu Leu Arg				
	580		585	590
Arg Arg Glu Asp Trp Pro Ser Arg Leu Gln Met Phe Phe Ala Asn Asn				
	595		600	605
His Asp Gln Glu Phe Asp Pro Pro Lys Val Tyr Pro Pro Val Pro Ala				
	610		615	620
Glu Lys Arg Lys Pro Ile Arg Val Leu Ser Leu Phe Asp Gly Ile Ala				
625		630		635 640
Thr Gly Leu Leu Val Leu Lys Asp Leu Gly Ile Gln Val Asp Arg Tyr				
	645		650	655
Ile Ala Ser Glu Val Cys Glu Asp Ser Ile Thr Val Gly Met Val Arg				
	660		665	670

His	Gln	Gly	Lys	Ile	Met	Tyr	Val	Gly	Asp	Val	Arg	Ser	Val	Thr	Gln	675	680	685	
Lys	His	Ile	Gln	Glu	Trp	Gly	Pro	Phe	Asp	Leu	Val	Ile	Gly	Gly	Ser	690	695	700	
Pro	Cys	Asn	Asp	Leu	Ser	Ile	Val	Asn	Pro	Ala	Arg	Lys	Gly	Leu	Tyr	705	710	715	720
Glu	Gly	Thr	Gly	Arg	Leu	Phe	Phe	Glu	Phe	Tyr	Arg	Leu	Leu	His	Asp	725	730	735	
Ala	Arg	Pro	Lys	Glu	Gly	Asp	Asp	Arg	Pro	Phe	Phe	Trp	Leu	Phe	Glu	740	745	750	
Asn	Val	Val	Ala	Met	Gly	Val	Ser	Asp	Lys	Arg	Asp	Ile	Ser	Arg	Phe	755	760	765	
Leu	Glu	Ser	Asn	Pro	Val	Met	Ile	Asp	Ala	Lys	Glu	Val	Ser	Ala	Ala	770	775	780	
His	Arg	Ala	Arg	Tyr	Phe	Trp	Gly	Asn	Leu	Pro	Gly	Met	Asn	Arg	Pro	785	790	795	800
Leu	Ala	Ser	Thr	Val	Asn	Asp	Lys	Leu	Glu	Leu	Gln	Glu	Cys	Leu	Glu	805	810	815	
His	Gly	Arg	Ile	Ala	Lys	Phe	Ser	Lys	Val	Arg	Thr	Ile	Thr	Thr	Arg	820	825	830	
Ser	Asn	Ser	Ile	Lys	Gln	Gly	Lys	Asp	Gln	His	Phe	Pro	Val	Phe	Met	835	840	845	
Asn	Glu	Lys	Glu	Asp	Ile	Leu	Trp	Cys	Thr	Glu	Met	Glu	Arg	Val	Phe	850	855	860	
Gly	Phe	Pro	Val	His	Tyr	Thr	Asp	Val	Ser	Asn	Met	Ser	Arg	Leu	Ala	865	870	875	880
Arg	Gln	Arg	Leu	Leu	Gly	Arg	Ser	Trp	Ser	Val	Pro	Val	Ile	Arg	His	885	890	895	

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<210> 6

<211> 859

<212> PRT

<213> Mus musculus

<400> 6

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Asp Thr Lys Asp Ala Pro Ser Pro Pro Val Leu Glu Ala Ile Cys Thr
35 40 45

Glu Pro Val Cys Thr Pro Glu Thr Arg Gly Arg Arg Ser Ser Ser Arg
50 55 60

Leu Ser Lys Arg Glu Val Ser Ser Leu Leu Asn Tyr Thr Gln Asp Met
65 70 75 80

Thr Gly Asp Gly Asp Arg Asp Asp Glu Val Asp Asp Gly Asn Gly Ser
85 90 95

Asp Ile Leu Met Pro Lys Leu Thr Arg Glu Thr Lys Asp Thr Arg Thr
100 105 110

Arg Ser Glu Ser Pro Ala Val Arg Thr Arg His Ser Asn Gly Thr Ser
115 120 125

Ser Leu Glu Arg Gln Arg Ala Ser Pro Arg Ile Thr Arg Gly Arg Gln
130 135 140

Gly Arg His His Val Gln Glu Tyr Pro Val Glu Phe Pro Ala Thr Arg
145 150 155 160

Ser Arg Arg Arg Arg Ala Ser Ser Ser Ala Ser Thr Pro Trp Ser Ser
165 170 175

Pro	Ala	Ser	Val	Asp	Phe	Met	Glu	Glu	Val	Thr	Pro	Lys	Ser	Val	Ser	180	185	190
Thr	Pro	Ser	Val	Asp	Leu	Ser	Gln	Asp	Gly	Asp	Gln	Glu	Gly	Met	Asp	195	200	205
Thr	Thr	Gln	Val	Asp	Ala	Glu	Ser	Arg	Asp	Gly	Asp	Ser	Thr	Glu	Tyr	210	215	220
Gln	Asp	Asp	Lys	Glu	Phe	Gly	Ile	Gly	Asp	Leu	Val	Trp	Gly	Lys	Ile	225	230	235
Lys	Gly	Phe	Ser	Trp	Trp	Pro	Ala	Met	Val	Val	Ser	Trp	Lys	Ala	Thr	245	250	255
Ser	Lys	Arg	Gln	Ala	Met	Pro	Gly	Met	Arg	Trp	Val	Gln	Trp	Phe	Gly	260	265	270
Asp	Gly	Lys	Phe	Ser	Glu	Ile	Ser	Ala	Asp	Lys	Leu	Val	Ala	Leu	Gly	275	280	285
Leu	Phe	Ser	Gln	His	Phe	Asn	Leu	Ala	Thr	Phe	Asn	Lys	Leu	Val	Ser	290	295	300
Tyr	Arg	Lys	Ala	Met	Tyr	His	Thr	Leu	Glu	Lys	Ala	Arg	Val	Arg	Ala	305	310	315
Gly	Lys	Thr	Phe	Ser	Ser	Ser	Pro	Gly	Glu	Ser	Leu	Glu	Asp	Gln	Leu	325	330	335
Lys	Pro	Met	Leu	Glu	Trp	Ala	His	Gly	Gly	Phe	Lys	Pro	Thr	Gly	Ile	340	345	350
Glu	Gly	Leu	Lys	Pro	Asn	Lys	Lys	Gln	Pro	Val	Val	Asn	Lys	Ser	Lys	355	360	365
Val	Arg	Arg	Ser	Asp	Ser	Arg	Asn	Leu	Glu	Pro	Arg	Arg	Arg	Glu	Asn	370	375	380
Lys	Ser	Arg	Arg	Arg	Thr	Thr	Asn	Asp	Ser	Ala	Ala	Ser	Glu	Ser	Pro	385	390	395
Pro	Pro	Lys	Arg	Leu	Lys	Thr	Asn	Ser	Tyr	Gly	Gly	Lys	Asp	Arg	Gly			

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Glu Asp Glu Glu Ser Arg Glu Arg Met Ala Ser Glu Val Thr Asn Asn					
	420		425		430
Lys Gly Asn Leu Glu Asp Arg Cys Leu Ser Cys Gly Lys Lys Asn Pro					
	435		440		445
Val Ser Phe His Pro Leu Phe Glu Gly Gly Leu Cys Gln Ser Cys Arg					
	450		455		460
Asp Arg Phe Leu Glu Leu Phe Tyr Met Tyr Asp Glu Asp Gly Tyr Gln					
	465		470		475
					480
Ser Tyr Cys Thr Val Cys Cys Glu Gly Arg Glu Leu Leu Leu Cys Ser					
			485		490
					495
Asn Thr Ser Cys Cys Arg Cys Phe Cys Val Glu Cys Leu Glu Val Leu					
	500		505		510
Val Gly Ala Gly Thr Ala Glu Asp Ala Lys Leu Gln Glu Pro Trp Ser					
	515		520		525
Cys Tyr Met Cys Leu Pro Gln Arg Cys His Gly Val Leu Arg Arg Arg					
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Lys Asp Trp Asn Met Arg Leu Gln Asp Phe Phe Thr Thr Asp Pro Asp					
	545		550		555
					560
Leu Glu Glu Phe Glu Pro Pro Lys Leu Tyr Pro Ala Ile Pro Ala Ala					
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					575
Lys Arg Arg Pro Ile Arg Val Leu Ser Leu Phe Asp Gly Ile Ala Thr					
	580		585		590
Gly Tyr Leu Val Leu Lys Glu Leu Gly Ile Lys Val Glu Lys Tyr Ile					
	595		600		605
Ala Ser Glu Val Cys Ala Glu Ser Ile Ala Val Gly Thr Val Lys His					
	610		615		620
Glu Gly Gln Ile Lys Tyr Val Asn Asp Val Arg Lys Ile Thr Lys Lys					
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					640

Asn Ile Glu Glu Trp Gly Pro Phe Asp Leu Val Ile Gly Gly Ser Pro			
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Cys Asn Asp Leu Ser Asn Val Asn Pro Ala Arg Lys Gly Leu Tyr Glu			
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Gly Thr Gly Arg Leu Phe Phe Glu Phe Tyr His Leu Leu Asn Tyr Thr			
675	680	685	
Arg Pro Lys Glu Gly Asp Asn Arg Pro Phe Phe Trp Met Phe Glu Asn			
690	695	700	
Val Val Ala Met Lys Val Asn Asp Lys Lys Asp Ile Ser Arg Phe Leu			
705	710	715	720
Ala Cys Asn Pro Val Met Ile Asp Ala Ile Lys Val Ser Ala Ala His			
725	730	735	
Arg Ala Arg Tyr Phe Trp Gly Asn Leu Pro Gly Met Asn Arg Pro Val			
740	745	750	
Met Ala Ser Lys Asn Asp Lys Leu Glu Leu Gln Asp Cys Leu Glu Phe			
755	760	765	
Ser Arg Thr Ala Lys Leu Lys Lys Val Gln Thr Ile Thr Thr Lys Ser			
770	775	780	
Asn Ser Ile Arg Gln Gly Lys Asn Gln Leu Phe Pro Val Val Met Asn			
785	790	795	800
Gly Lys Asp Asp Val Leu Trp Cys Thr Glu Leu Glu Arg Ile Phe Gly			
805	810	815	
Phe Pro Ala His Tyr Thr Asp Val Ser Asn Met Gly Arg Gly Ala Arg			
820	825	830	
Gln Lys Leu Leu Gly Arg Ser Trp Ser Val Pro Val Ile Arg His Leu			
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Phe Ala Pro Leu Lys Asp Tyr Phe Ala Cys Glu			
850	855		

<210> 7

<211> 912

<212> PRT

<213> Homo sapiens

<400> 7

Met	Pro	Ala	Met	Pro	Ser	Ser	Gly	Pro	Gly	Asp	Thr	Ser	Ser	Ser	Ala
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			20					25					30		

Arg	Gly	Lys	Glu	Glu	Arg	Gln	Glu	Pro	Ser	Thr	Thr	Ala	Arg	Lys	Val
		35					40					45			

Gly	Arg	Pro	Gly	Arg	Lys	Arg	Lys	His	Pro	Pro	Val	Glu	Ser	Gly	Asp
	50					55					60				

Thr	Pro	Lys	Asp	Pro	Ala	Val	Ile	Ser	Lys	Ser	Pro	Ser	Met	Ala	Gln
65					70					75					80

Asp	Ser	Gly	Ala	Ser	Glu	Leu	Leu	Pro	Asn	Gly	Asp	Leu	Glu	Lys	Arg
				85					90					95	

Ser	Glu	Pro	Gln	Pro	Glu	Glu	Gly	Ser	Pro	Ala	Gly	Gly	Gln	Lys	Gly
		100						105					110		

Gly	Ala	Pro	Ala	Glu	Gly	Glu	Gly	Ala	Ala	Glu	Thr	Leu	Pro	Glu	Ala
		115					120					125			

Ser	Arg	Ala	Val	Glu	Asn	Gly	Cys	Cys	Thr	Pro	Lys	Glu	Gly	Arg	Gly
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Ala	Pro	Ala	Glu	Ala	Gly	Lys	Glu	Gln	Lys	Glu	Thr	Asn	Ile	Glu	Ser
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Met	Lys	Met	Glu	Gly	Ser	Arg	Gly	Arg	Leu	Arg	Gly	Gly	Leu	Gly	Trp
			165						170					175	

Glu	Ser	Ser	Leu	Arg	Gln	Arg	Pro	Met	Pro	Arg	Leu	Thr	Phe	Gln	Ala
			180					185						190	

Gly Asp Pro Tyr Tyr Ile Ser Lys Arg Lys Arg Asp Glu Trp Leu Ala
195 200 205

Arg Trp Lys Arg Glu Ala Glu Lys Lys Ala Lys Val Ile Ala Gly Met
210 215 220

Asn Ala Val Glu Glu Asn Gln Gly Pro Gly Glu Ser Gln Lys Val Glu
225 230 235 240

Glu Ala Ser Pro Pro Ala Val Gln Gln Pro Thr Asp Pro Ala Ser Pro
245 250 255

Thr Val Ala Thr Thr Pro Glu Pro Val Gly Ser Asp Ala Gly Asp Lys
260 265 270

Asn Ala Thr Lys Ala Gly Asp Asp Glu Pro Glu Tyr Glu Asp Gly Arg
275 280 285

Gly Phe Gly Ile Gly Glu Leu Val Trp Gly Lys Leu Arg Gly Phe Ser
290 295 300

Trp Trp Pro Gly Arg Ile Val Ser Trp Trp Met Thr Gly Arg Ser Arg
305 310 315 320

Ala Ala Glu Gly Thr Arg Trp Val Met Trp Phe Gly Asp Gly Lys Phe
325 330 335

Ser Val Val Cys Val Glu Lys Leu Met Pro Leu Ser Ser Phe Cys Ser
340 345 350

Ala Phe His Gln Ala Thr Tyr Asn Lys Gln Pro Met Tyr Arg Lys Ala
355 360 365

Ile Tyr Glu Val Leu Gln Val Ala Ser Ser Arg Ala Gly Lys Leu Phe
370 375 380

Pro Val Cys His Asp Ser Asp Glu Ser Asp Thr Ala Lys Ala Val Glu
385 390 395 400

Val Gln Asn Lys Pro Met Ile Glu Trp Ala Leu Gly Gly Phe Gln Pro
405 410 415

Ser Gly Pro Lys Gly Leu Glu Pro Pro Glu Glu Glu Lys Asn Pro Tyr

420	425	430
Lys Glu Val Tyr Thr Asp Met Trp Val Glu Pro Glu Ala Ala Ala Tyr		
435	440	445
Ala Pro Pro Pro Pro Ala Lys Lys Pro Arg Lys Ser Thr Ala Glu Lys		
450	455	460
Pro Lys Val Lys Glu Ile Ile Asp Glu Arg Thr Arg Glu Arg Leu Val		
465	470	475 480
Tyr Glu Val Arg Gln Lys Cys Arg Asn Ile Glu Asp Ile Cys Ile Ser		
485	490	495
Cys Gly Ser Leu Asn Val Thr Leu Glu His Pro Leu Phe Val Gly Gly		
500	505	510
Met Cys Gln Asn Cys Lys Asn Cys Phe Leu Glu Cys Ala Tyr Gln Tyr		
515	520	525
Asp Asp Asp Gly Tyr Gln Ser Tyr Cys Thr Ile Cys Cys Gly Gly Arg		
530	535	540
Glu Val Leu Met Cys Gly Asn Asn Asn Cys Cys Arg Cys Phe Cys Val		
545	550	555 560
Glu Cys Val Asp Leu Leu Val Gly Pro Gly Ala Ala Gln Ala Ala Ile		
565	570	575
Lys Glu Asp Pro Trp Asn Cys Tyr Met Cys Gly His Lys Gly Thr Tyr		
580	585	590
Gly Leu Leu Arg Arg Arg Glu Asp Trp Pro Ser Arg Leu Gln Met Phe		
595	600	605
Phe Ala Asn Asn His Asp Gln Glu Phe Asp Pro Pro Lys Val Tyr Pro		
610	615	620
Pro Val Pro Ala Glu Lys Arg Lys Pro Ile Arg Val Leu Ser Leu Phe		
625	630	635 640
Asp Gly Ile Ala Thr Gly Leu Leu Val Leu Lys Asp Leu Gly Ile Gln		
645	650	655

Val	Asp	Arg	Tyr	Ile	Ala	Ser	Glu	Val	Cys	Glu	Asp	Ser	Ile	Thr	Val				
																660	665	670	
Gly	Met	Val	Arg	His	Gln	Gly	Lys	Ile	Met	Tyr	Val	Gly	Asp	Val	Arg				
																675	680	685	
Ser	Val	Thr	Gln	Lys	His	Ile	Gln	Glu	Trp	Gly	Pro	Phe	Asp	Leu	Val				
																690	695	700	
Ile	Gly	Gly	Ser	Pro	Cys	Asn	Asp	Leu	Ser	Ile	Val	Asn	Pro	Ala	Arg				
																705	710	715	720
Lys	Gly	Leu	Tyr	Glu	Gly	Thr	Gly	Arg	Leu	Phe	Phe	Glu	Phe	Tyr	Arg				
																725	730	735	
Leu	Leu	His	Asp	Ala	Arg	Pro	Lys	Glu	Gly	Asp	Asp	Arg	Pro	Phe	Phe				
																740	745	750	
Trp	Leu	Phe	Glu	Asn	Val	Val	Ala	Met	Gly	Val	Ser	Asp	Lys	Arg	Asp				
																755	760	765	
Ile	Ser	Arg	Phe	Leu	Glu	Ser	Asn	Pro	Val	Met	Ile	Asp	Ala	Lys	Glu				
																770	775	780	
Val	Ser	Ala	Ala	His	Arg	Ala	Arg	Tyr	Phe	Trp	Gly	Asn	Leu	Pro	Gly				
																785	790	795	800
Met	Asn	Arg	Pro	Leu	Ala	Ser	Thr	Val	Asn	Asp	Lys	Leu	Glu	Leu	Gln				
																805	810	815	
Glu	Cys	Leu	Glu	His	Gly	Arg	Ile	Ala	Lys	Phe	Ser	Lys	Val	Arg	Thr				
																820	825	830	
Ile	Thr	Thr	Arg	Ser	Asn	Ser	Ile	Lys	Gln	Gly	Lys	Asp	Gln	His	Phe				
																835	840	845	
Pro	Val	Phe	Met	Asn	Glu	Lys	Glu	Asp	Ile	Leu	Trp	Cys	Thr	Glu	Met				
																850	855	860	
Glu	Arg	Val	Phe	Gly	Phe	Pro	Val	His	Tyr	Thr	Asp	Val	Ser	Asn	Met				
																865	870	875	880

Ser Arg Leu Ala Arg Gln Arg Leu Leu Gly Arg Ser Trp Ser Val Pro
885 890 895

Val Ile Arg His Leu Phe Ala Pro Leu Lys Glu Tyr Phe Ala Cys Val
900 905 910

<210> 8

<211> 853

<212> PRT

<213> Homo sapiens

<400> 8

Met Lys Gly Asp Thr Arg His Leu Asn Gly Glu Glu Asp Ala Gly Gly
1 5 10 15

Arg Glu Asp Ser Ile Leu Val Asn Gly Ala Cys Ser Asp Gln Ser Ser
20 25 30

Asp Ser Pro Pro Ile Leu Glu Ala Ile Arg Thr Pro Glu Ile Arg Gly
35 40 45

Arg Arg Ser Ser Ser Arg Leu Ser Lys Arg Glu Val Ser Ser Leu Leu
50 55 60

Ser Tyr Thr Gln Asp Leu Thr Gly Asp Gly Asp Gly Glu Asp Gly Asp
65 70 75 80

Gly Ser Asp Thr Pro Val Met Pro Lys Leu Phe Arg Glu Thr Arg Thr
85 90 95

Arg Ser Glu Ser Pro Ala Val Arg Thr Arg Asn Asn Asn Ser Val Ser
100 105 110

Ser Arg Glu Arg His Arg Pro Ser Pro Arg Ser Thr Arg Gly Arg Gln
115 120 125

Gly Arg Asn His Val Asp Glu Ser Pro Val Glu Phe Pro Ala Thr Arg
130 135 140

Ser Leu Arg Arg Arg Ala Thr Ala Ser Ala Gly Thr Pro Trp Pro Ser
145 150 155 160

Pro Pro Ser Ser Tyr Leu Thr Ile Asp Leu Thr Asp Asp Thr Glu Asp
165 170 175

Thr His Gly Thr Pro Gln Ser Ser Ser Thr Pro Tyr Ala Arg Leu Ala
180 185 190

Gln Asp Ser Gln Gln Gly Gly Met Glu Ser Pro Gln Val Glu Ala Asp
195 200 205

Ser Gly Asp Gly Asp Ser Ser Glu Tyr Gln Asp Gly Lys Glu Phe Gly
210 215 220

Ile Gly Asp Leu Val Trp Gly Lys Ile Lys Gly Phe Ser Trp Trp Pro
225 230 235 240

Ala Met Val Val Ser Trp Lys Ala Thr Ser Lys Arg Gln Ala Met Ser
245 250 255

Gly Met Arg Trp Val Gln Trp Phe Gly Asp Gly Lys Phe Ser Glu Val
260 265 270

Ser Ala Asp Lys Leu Val Ala Leu Gly Leu Phe Ser Gln His Phe Asn
275 280 285

Leu Ala Thr Phe Asn Lys Leu Val Ser Tyr Arg Lys Ala Met Tyr His
290 295 300

Ala Leu Glu Lys Ala Arg Val Arg Ala Gly Lys Thr Phe Pro Ser Ser
305 310 315 320

Pro Gly Asp Ser Leu Glu Asp Gln Leu Lys Pro Met Leu Glu Trp Ala
325 330 335

His Gly Gly Phe Lys Pro Thr Gly Ile Glu Gly Leu Lys Pro Asn Asn
340 345 350

Thr Gln Pro Val Val Asn Lys Ser Lys Val Arg Arg Ala Gly Ser Arg
355 360 365

Lys Leu Glu Ser Arg Lys Tyr Glu Asn Lys Thr Arg Arg Arg Thr Ala

370		375		380
Asp Asp Ser Ala Thr Ser Asp Tyr Cys Pro Ala Pro Lys Arg Leu Lys				
385		390		395 400
Thr Asn Cys Tyr Asn Asn Gly Lys Asp Arg Gly Asp Glu Asp Gln Ser				
	405		410	415
Arg Glu Gln Met Ala Ser Asp Val Ala Asn Asn Lys Ser Ser Leu Glu				
	420		425	430
Asp Gly Cys Leu Ser Cys Gly Arg Lys Asn Pro Val Ser Phe His Pro				
	435		440	445
Leu Phe Glu Gly Gly Leu Cys Gln Thr Cys Arg Asp Arg Phe Leu Glu				
	450		455	460
Leu Phe Tyr Met Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys Thr Val				
465		470		475 480
Cys Cys Glu Gly Arg Glu Leu Leu Leu Cys Ser Asn Thr Ser Cys Cys				
	485		490	495
Arg Cys Phe Cys Val Glu Cys Leu Glu Val Leu Val Gly Thr Gly Thr				
	500		505	510
Ala Ala Glu Ala Lys Leu Gln Glu Pro Trp Ser Cys Tyr Met Cys Leu				
	515		520	525
Pro Gln Arg Cys His Gly Val Leu Arg Arg Arg Lys Asp Trp Asn Val				
	530		535	540
Arg Leu Gln Ala Phe Phe Thr Ser Asp Thr Gly Leu Glu Tyr Glu Ala				
545		550		555 560
Pro Lys Leu Tyr Pro Ala Ile Pro Ala Ala Arg Arg Arg Pro Ile Arg				
	565		570	575
Val Leu Ser Leu Phe Asp Gly Ile Ala Thr Gly Tyr Leu Val Leu Lys				
	580		585	590
Glu Leu Gly Ile Lys Val Gly Lys Tyr Val Ala Ser Glu Val Cys Glu				
	595		600	605

Glu Ser Ile Ala Val Gly Thr Val Lys His Glu Gly Asn Ile Lys Tyr
610 615 620

Val Asn Asp Val Arg Asn Ile Thr Lys Lys Asn Ile Glu Glu Trp Gly
625 630 635 640

Pro Phe Asp Leu Val Ile Gly Gly Ser Pro Cys Asn Asp Leu Ser Asn
645 650 655

Val Asn Pro Ala Arg Lys Gly Leu Tyr Glu Gly Thr Gly Arg Leu Phe
660 665 670

Phe Glu Phe Tyr His Leu Leu Asn Tyr Ser Arg Pro Lys Glu Gly Asp
675 680 685

Asp Arg Pro Phe Phe Trp Met Phe Glu Asn Val Val Ala Met Lys Val
690 695 700

Gly Asp Lys Arg Asp Ile Ser Arg Phe Leu Glu Cys Asn Pro Val Met
705 710 715 720

Ile Asp Ala Ile Lys Val Ser Ala Ala His Arg Ala Arg Tyr Phe Trp
725 730 735

Gly Asn Leu Pro Gly Met Asn Arg Pro Val Ile Ala Ser Lys Asn Asp
740 745 750

Lys Leu Glu Leu Gln Asp Cys Leu Glu Tyr Asn Arg Ile Ala Lys Leu
755 760 765

Lys Lys Val Gln Thr Ile Thr Thr Lys Ser Asn Ser Ile Lys Gln Gly
770 775 780

Lys Asn Gln Leu Phe Pro Val Val Met Asn Gly Lys Glu Asp Val Leu
785 790 795 800

Trp Cys Thr Glu Leu Glu Arg Ile Phe Gly Phe Pro Val His Tyr Thr
805 810 815

Asp Val Ser Asn Met Gly Arg Gly Ala Arg Gln Lys Leu Leu Gly Arg
820 825 830

Ser Trp Ser Val Pro Val Ile Arg His Leu Phe Ala Pro Leu Lys Asp
835 840 845

Tyr Phe Ala Cys Glu
850

<210> 9

<211> 393

<212> DNA

<213> Mus musculus

<400> 9

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agccgctggtt acctcttggtt tacagtttat atatatatga tagatatgag atatatatat 120
ataaaaggta ctgttaacta ctgtacatcc cgacttcata atggtgcttt caaaacagcg 180
agatgagcaa agacatcagc ttccgcctgg ccctcgtgtg caaatggcgt ttcattgcca 240
tggatggtgt agaggggagc agctggaggg ggtttcacaa actgaaggat gacccatata 300
acccccacc cctgccccat gcctagcttc acctgccaaa aaggggctca gctgaggtgg 360
tcggaccctg gggaagctga gtgtggaatt tat 393
```

<210> 10

<211> 424

<212> DNA

<213> Mus musculus

<400> 10

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gaagaaaacc agttttctaga agccgctggtt acctcttggtt tacagtttat atatatatga 60
tagatatgag atatatatat ataaaaggta ctgttaacta ctgtacatcc cgacttcata 120
atggtgcttt caaaacagcg agatgagcaa agacatcagc ttccgcctgg ccctcgtgtg 180
aaagggtttc agcccaggat ggtgagaggg gagcatctgg aggggggtttt aacaaaactga 240
aggatgaccc atataccccc ccaccctgc cccatgccta gcttcacctg ccaaaaagg 300
gctcagctga ggtggtcgga ccctggggaa gctgagtgtg gaatttatcc agactcgcgt 360
gcaataacct tagaatatga atctaaaatg actgcctcag aaaaatggct tgagaaaaca 420
ttgt 424
```

<210> 11

<211> 461

<212> DNA

<213> Mus musculus

<400> 11

```
tttaaagcaa accacagagg aggaaaacgc cggaggcttg gccttgcaaa agggttggac 60
```

```
atcatctcct gagttttcaa tgtaacctt cagtcctatc taaaaagcaa aataggcccc 120
tccccttcgt tcccctccgg tcctaggagg cgaacttttt gttttctact ctttttcaga 180
ggggttttct gtttgtttgg gtttttgttt cttgctgtga ctgaaacaag agagttattg 240
cagcaaaatc agtaacaaca aaaagtagaa atgccttgga gcggaaaggg agagagggaa 300
aattctataa aaacttaaaa tattggtttt tttttttttc cttttctata tatctctttg 360
gttgtctcta gcctgatcag ataggagcac aaacaggaag agaatagaga ccctcggagg 420
cagagtctcc tctccacccc cccgagcagt ctcaacagca c 461
```

<210> 12

<211> 465

<212> DNA

<213> Mus musculus

<400> 12

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tcagaggggt tttctgtttg ttggggtttt tgtttcttgc tgtgactgaa acaagagagt 60
tattgcagca aaatcagtaa caacaaaaag tagaaatgcc ttggagagga aaggagagaga 120
gggaaaattc tataaaaact taaaatattg gttttttttt tttttccttt tctatatatc 180
tctttggttg tctctagcct gatcagatag gagcacaac aggaagagaa tagagaccct 240
cggaggcaga gtctcctctc ccaccccccg agcagtctca acagcaccat tcctgggtcat 300
gcaaaacaga acccaactag cagcagggcg ctgagagaac accacaccag acacttttct 360
acagtatttc aggtgcctac cacacaggaa acctgaaga aaaccagttt ctagaagccg 420
ctgttacctc ttgtttacag tttatatata tatgatagat atgag 465
```

<210> 13

<211> 393

<212> DNA

<213> Mus musculus

<400> 13

```
aaaacgccgg aggcctttgc cttgcacaag ggttggacat catctcctga gttttcaatg 60
ttaaccttca gtccatctta aaaagcaaaa taggccctc cccttcttcc cctccgggtcc 120
taggaggcga actttttggt ttctactctt tttcagaggg gttttctggt tgtttgggtt 180
tttgtttctt gctgtgactg aaacaagaga gttattgcag caaaatcagt aacaacaaaa 240
agtagaaatg ctttggagag gaaagggaga gagggaaaat tctataaaaa cttaaaatat 300
tggttttttt ttttttcctt ttctatatat cgctttgggt gtctctagcc tgatcagata 360
ggagcacaaa caggaagaga atagagaccc tcg 393
```

<210> 14

<211> 309

<212> DNA

<213> Mus musculus

<400> 14

gtgatgattg acgccaaaga agtgtctgct gcacacaggg cccgttactt ctaggggtaa 60
ccttcctggc atgaacaggc ctttggatcc actgtgaatg ataagctgga gctgcaagag 120
tgtctggagc acggcagaat agccaagtgc agcaaaagtga ggaccattac caccagggtca 180
aactctataa agcaggggcaa agaccagcat ttccccgtct tcatgaacga gaaggaggac 240
atcctgtggg gcaactgaaat ggaaaagggtc tttggcttcc ccgccacta cacagacgtc 300
tccaacatg 309

<210> 15
<211> 341
<212> DNA
<213> Mus musculus

<400> 15
tgttaacctt cagtcctatc taaaaagcaa aataggcccc tccccttctt cccctccggg 60
cctaggaggc gaactttttg ttttctactc tttttcagag gggttttctg tttgtttggg 120
tttttgtttc ttgctgtgac tgaaacaaga gagttattgc agcaaaatca gtaacaacaa 180
aaagtagaaa tgccttggag aggaaaggga gagagggaaa attctataaa aacttaaaat 240
attggttttt ttttttttcc ttttctatat atctctttgg ttgtctctag cctgatcaga 300
taggagcaca aacaggaaga gaatagagac cctcggaggc a 341

<210> 16
<211> 240
<212> DNA
<213> Mus musculus

<220>
<221> Unsure
<222> (32)..(32)
<223> May be any nucleic acid

<400> 16
acattttgta tgttttttta tttgctccag gnggggttaa tggcgggtca ctttccctca 60
ctctggaata tttctgatcc cacaaggggc ctcaacgtg gctgacgaat tcaaaatcag 120
ggacaatgtt ttctcaagcc atttttctga ggcagtcatt ttagattcat attctaaggt 180
tattgcacgc gagtctggat aaattccaca ctcagcttcc ccagggtccg accacctcag 240

<210> 17
<211> 256
<212> DNA
<213> Mus musculus

<220>
<221> Unsure
<222> (75)..(75)
<223> May be any nucleic acid

<400> 17

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atcagcttcc gcctggccct ctgtgcaaag ggtttcagcc caggatgggg agaggggagc 60
agctggaggg ggttntaaca aactgaagga tgacccatat cccccccac ccctgcccc 120
tgcctagctt cacctgcaa aaaggggctc agctgaggtg gtcggaccct ggggaagctg 180
agtgtggaat ttatccagac tcgctgcaa taacctaga atatgaatct aaaatgactg 240
cctcagaaaa atggct 256
```

<210> 18

<211> 435

<212> DNA

<213> Mus musculus

<400> 18

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gtggaagccc atgcaatgat ctctctaacg tcaatcctgc ccgcaaaggt ttatatgagg 60
gcacaggaag gctcttcttc gagttttacc acttgctgaa ttataccgc cccaaggagg 120
gcgacaaccg tccattcttc tggatgttcg agaatgttgt ggccatgaaa gtgaatgaca 180
agaaagacat ctcaagattc ctggcatgta acccagtgat gatcgatgcc atcaagggtg 240
ctgctgctca cagggcccgg tacttctggg gtaacctacc cggaatgaac agggccgtga 300
tggcttcaaa gaatgataag ctcgagctgc aggactgcct ggagttcagt aggacagcaa 360
agttaaagaa agtgcagaca ataaccacca agtcgaactc catcagacag ggcaaaaacc 420
agcttttccc tgtag 435
```

<210> 19

<211> 522

<212> DNA

<213> Mus musculus

<400> 19

```
gatgatgtca gcagggatga catcaccacc ttagggctt ttccctggca ggggcccattg 60
tggctagtcc tcacgaagac tggagtagaa tgtttgagc tcaggaaggg tgggtggagt 120
ggagtctctt ccaggtgtga gggatacgaa ggaggaagct tagggaaatc cattccccac 180
tccctcttgc caaatgaggg gccagtccc caacagctca ggtccccaga accccctagt 240
tcctcatgag aagctaggac cagaagcaca tcgttcccc tctctgagca gtgtttgggg 300
aactacagtg aaaaccttct ggagatgtta aaagcttttt accccacgat agattgtgtt 360
tttaaggggt gcttttttta ggggcatcac tggagataag aaagctgcat ttcagaaatg 420
ccatcgtaat ggttttttaa caccttttac ctaattacag gtgctatttt atagaagcag 480
acaacacttc tttttatgac tctcagactt ctattttcat gt 522
```

<210> 20

<211> 348

<212> DNA

<213> Mus musculus

<400> 20

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aaaggaggcc cattagagtc ctgtctctgt ttgatggaat tgcaacgggg tacttggtgc 60
tcaaggagtt ggggtattaaa gtggaaaaagt acattgcctc cgaagtctgt gcagagtcca 120
tcgctgtggg aactgttaag catgaaggcc agatcaaata tgtcaatgac gtccggaaaa 180
tcaccaagaa aaatattgaa gagtggggcc cgttcgactt ggtgattggt ggaagcccat 240
gcaatgatct ctctaacgtc aatcctgccc gcaaagggtt atatgagggc acaggaaggc 300
tcttcttcga gttttaccac ttgctgaatt ataccgcccc caaggagg 348
```

<210> 21

<211> 258

<212> DNA

<213> Mus musculus

<400> 21

```
gtttatgggt taagtcttcc tggcaccttc cccttgcttt ggtacaaggg ctgaagtcct 60
gttggtcttg tagcatttcc caggatgatg atgtcagcag ggatgacatc atcaccttta 120
gggcttttcc ctggcagggg cccatgtggc tagtcctcac gaagactgga gtagaatgtt 180
tggagctcag gaaggggtggg tggagtgtgc ctcttcagg tgtgagggat acgaaggagg 240
aagcttaggg aaatccat 258
```

<210> 22

<211> 334

<212> DNA

<213> Mus musculus

<400> 22

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tggggtaacc taccgggaat gaacagttaa agaaagtgca gacaataacc accaagtcga 60
actccatcag acagggcaaa aaccagcttt tccctgtagt catgaatggc aaggacgacg 120
ttttgtgggt cactgagctc gaaaggatct tcggcttccc tgctcactac acggacgtgt 180
ccaacatggg ccgcggcgcc cgtcagaagc tgctgggcag gtccctggagt gtaccggtca 240
tcagacacct gtttgcccc ttgaaggact actttgcctg tgaatagttc taccaggac 300
tggggagctc tcggtcagag ccagtgccca gagt 334
```

<210> 23

<211> 299

<212> DNA

<213> Mus musculus

<220>

<221> Unsure

<222> (59)..(59)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (173)..(173)

<223> May be any nucleic acid

<400> 23

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ctgtttttgt ttgttttttt ggtatcttag ccatcacttc tgagtgataa actcaggang 60
gtaaaagaaa gccatcttac tacctacttc aagttttaaa gtttcagggt aagagaacat 120
gagcaccatg ccgggctact ctaagcagcc aggtctgagc tgtgcacacg ganggagcac 180
cggggctccc ctgcaaggcc aggaggctct gctcccactg agcaggagaa agctgaggta 240
cagtgatgtg agggcccaca caggtgagct aaaaagggga caggtgaggt gccttcagg 299
```

<210> 24

<211> 455

<212> DNA

<213> Mus musculus

<400> 24

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gatcgcttcc tagagctctt ctacatgtat gatgaggacg gctatcagtc ctactgcacc 60
gtgtctgtga gggccgtgaa ctgctgctgt gcagtaacac aagctgctgc agatgcttct 120
gtgtggagtg tctggagggt ctggtgggcg caggacagct gaggatgcca agctgcagga 180
accctggagc tgctatatgt gcctccctca gcgctgccat ggggtcctcc gacgcaggaa 240
agattggaac atgcgcctgc aagacttctt cactactgat cctgacctgg aagaatttca 300
ggagccacccc aagttgtacc cagcaattcc tgcagccaaa aggaggccca ttagagtcct 360
gtctctgttt gatggaattg caacggggta cttggtgctc aaggagtgg gtattaaagt 420
ggaaaagtac attgcctccg aagtctgtgc agagt 455
```

<210> 25

<211> 368

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (307)..(307)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (335)..(335)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (353)..(353)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (360)..(360)

<223> May be any nucleic acid

<400> 25

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acgttttgta tgttttttta tttgctccag gtgggggttt gactgtcact ttcccacact 60
ctggattagt tctgatccca ccacaaggag ccctcgaatt ggctaaagtg agaaactggg 120
cctgaagact ccgtaccctc tgccatcttg ccgagggagt ctcttttttag aaaacaatca 180
aagggttatt gcatgagtct ggatgaatcc cactctcagc ttgtccacgg gcccgaccac 240
ctcatctagc cccctttttg gcaagggaga acctggctcc caagttctcc tccttcactt 300
tcgttancaa accaaggggg aagaagccca ccgtngagaa cgcgccatct tgnaaagctn 360
ggtcttcc 368
```

<210> 26

<211> 399

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (87)..(87)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (314)..(314)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (318)..(318)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (370)..(370)

<223> May be any nucleic acid

<400> 26

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gaacatgagg atggagagaa gtatcagcac ccagaagaga aaaaggaatt taaaacaaaa 60
accacagagg cggaaatacc ggaggcnttt gcttgcgaaa agggttggac atcatctoct 120
gatttttcaa tgttattctt cagtcctatt taaaaacaaa accaagctcc ctcccttcc 180
tcccccttcc cttttttttc ggtcagacct tttattttct actcttttca gagggttttt 240
ctgtttggtt gggttttggt tcttgctgtg actgaaacaa gaagggttatt gcagcaaaaa 300
tcaggtaaca aaanatangt aacaatacct tgcagaggaa aggtgggagg agaggaaaaa 360
agggaaattn ctatagaaat ctatatattg gggttggtt 399
```

<210> 27

<211> 318

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (205)..(205)

<223> May be any nucleic acid

<220>
<221> Unsure
<222> (275)..(275)
<223> May be any nucleic acid

<400> 27
gtacgagggtg cggcagaagt gccggaacat tgaggacatc tgcattctcct gtgggagcct 60
caatgttacc ctggaacacc ccctcttcgt tggaggaatg tgccaaaact gcaagaactg 120
ctttctggag tgtgcgtacc agtacgacga cgacggctac cagtcctact gcaccatctg 180
ctgtgggggc cgtgagggtgc tcatntgcgg aaacaacaac tgctgcaggt gcttttgctg 240
ggagtgtgtg gacctcttgg tggggccggg ggctncccag gcagcagtta aggaagatca 300
tgtacgtcgg ggacgtcc 318

<210> 28
<211> 259
<212> DNA
<213> Homo sapiens

<220>
<221> Unsure
<222> (227)..(227)
<223> May be any nucleic acid

<220>
<221> Unsure
<222> (234)..(234)
<223> May be any nucleic acid

<400> 28
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ggtgtgtgtt gagaagctga tgccgctgag ctctgttttc agtgcgttcc accaggccac 120
gtacaacaag cagcccatgt accgcaaagc catctacgag gtccctgcagg tggccagcag 180
ccgcgcgggg aagctgttcc cgggtgtgcca cgacagcgat gagagtnaca ctgncaaggc 240
cgtgggaggt gcagaacaa 259

<210> 29
<211> 483
<212> DNA
<213> Homo sapiens

<400> 29
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acactctgga ttagtctga tcccaccaca aggagccctc gaattggcta aagtgagaaa 120
ctgggcctga agactccgta ccctctgcca tcttgccgag ggagtctcct tttagaaaac 180
aatcaaaggg ttattgcatg agtctggatg aatcccactc tcagctgtcc acggggccga 240
ccacctcatc tagggcccctt tttggcaagg agaaccggg tcccaagttc tcctccttca 300
cttcgttaca aaccaggggg aaaaagccca cgtgaaaacg cggcatctgc aaaatgggtc 360

cctttcttca tccctgggga aacctttgcg ccaaggcaac gtggaaactg atggttttac 420
tcaactcgct gttttgaagc gccattatga aatcgggggt gtacgtaggt aaagtcccgt 480
gcc 483

<210> 30

<211> 337

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (41)..(41)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (45)..(45)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (176)..(176)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (190)..(190)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (207)..(207)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (265)..(265)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (290)..(290)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (317)..(317)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (322)..(322)

<223> May be any nucleic acid

<400> 30

gggcattcag gtggaccgct acattgcctc ggaggtgtgt naggntcca tcacggtggg 60

catggtgagg caccagggga agatcatgta cgtcggggac gtccgcagcg tcacacagaa 120
gcatatccag gagtggggcc cattcgatct ggtgattggg ggcagtcctt gcaatnacct 180
ctccatcgtn aaccctgctc gcaaggncct ctacgagggc actggccggc tcttctttta 240
gttctaccgc ctctgcatg atgcncggcc caaggagggg agatgatcgn cccttcttct 300
ggctctttta gaatgtngtg gnccatgggc gtttagt 337

<210> 31

<211> 271

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (234)..(234)

<223> May be any nucleic acid

<400> 31

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actactgtac aaccgcactt cataatgggt ctttcaaaca gcgagatgag taaaaacatc 120
agcttccacg ttgccttctg cgcaaagggt ttcaccaagg atggagaaag ggagacagct 180
tgcagatggc gcgttctcac ggtgggctct tccccttggg ttgtaacgaa gtgnaggagg 240
agaacttggg agccagggtc tccctgccaa a 271

<210> 32

<211> 430

<212> DNA

<213> Homo sapiens

<400> 32

acgttttgta tgttttttta tttgctccag gtgggggttt gactgtcact ttcccacact 60
ctggattagt tctgatccca ccacaaggag ccctcgaatt ggctaaagtg agaaactggg 120
cctgaagact ccgtaccctc tgccatcttg ccgagggagt ctcttttaga aaacaatcaa 180
agggttattg catgagtctg gatgaatccc actctcagct gtccacgggc ccgaccacct 240
catctagccc cctttttggc agggagaacc tggctcccaa gttctcctcc ttcacttcgt 300
tacaaaccaa ggggaagagc ccaccgtgag aacgcgccat ctgcaagctg tctccctttc 360
tccatccttg gtgaaacccc tttgcgcaga aggcaacgtg gaagctgatg tttttactca 420
tctcgtggt 430

<210> 33

<211> 483

<212> DNA

<213> Homo sapiens

<400> 33

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ctgggcctga agactccgta ccctctgcca tcttgccgag ggagtctcct tttagaaaac 180
aatcaaaggg ttattgcatg agtctggatg aatcccactc tcagctgtcc acggggccga 240
ccacctcatc taggcccctt tttggcaagg agaaccggg tcccaagttc tcctccttca 300
cttcgttaca aaccaggggg aaaaagccca cgtgaaaacg cggcatctgc aaaatgggtc 360
cctttcttca tccctgggga aacctttgcg ccaaggcaac gtggaaactg atggttttac 420
tcaactcgct gttttgaagc gccattatga aatcgggggt gtacgtaggt aaagtcccgt 480
gcc 483
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<210> 34

<211> 411

<212> DNA

<213> Homo sapiens

<400> 34

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tcccacactc tggattagtt ctgatccac cacaaggagc cctcgaattg gctaaagtga 120
gaaactgggc ctgaagactc cgtaccctct gccatcttgc cgagggagtc tccttttaga 180
aaacaatcaa agggttattg catgagtctg gatgaatccc actctcagct gtccacgggc 240
ccgaccacct catctagccc ctttttgga gggagaacct ggctcccaag ttctcctcct 300
tcacttcgtt acaaaccaag gggaagagcc caccgtgaga acgcgccatc tgcaagctgt 360
ctccctttct ccatccttgg tgaaaccctt tgcgcagaag gcaacgtgga a 411
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<210> 35

<211> 530

<212> DNA

<213> Homo sapiens

<400> 35

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ttcgctccgc tgaaggcgta ttttgctgt gtctaaggga catgggggca aactgaggta 120
gcgacacaaa gttaaacaca caaacacccc acacacaaca taatacaaca ccaagaacat 180
gaggatggag agaagtatca gccaccaga agagaacaag gaatttataa ccaaaaccac 240
agaggcggaa ataccggagg actttgcctt gcgaccaggg ttggacatca tctcctgatt 300
tttcaatgtt attcttcagt cctattttaa aacaaaacca agctcccttc ccttctctgcg 360
gcttcccttt tttttcggtc agacctttta ttttctactc ttttcagagg ggttttctgt 420
ttgtttgggt tttgtttctt gctgtgactg aaacaagaag gttattgcag caaaaatcag 480
taacaaaaaa tagtaacaat accttgacga ggaaaggtgg gagagaggaa 530
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<210> 36

<211> 535

<212> DNA

<213> Homo sapiens

<400> 36

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tttacgtttt gtatgttttt ttatttgctc caggtggggt tttgactgtc actttccac 60
actctggatt agttctgatc ccaccacaag gagccctcga attggctaaa gtgagaaact 120
gggcctgaag actccgtacc ctctgccatc ttgccgaggg agtctccttt tagaaaacaa 180
tcaaagggtt attgcatgag tctggatgaa tcccactctc agctgtccac gggcccgacc 240
acctcatcta gccccctttt tggcagggag aacctggctc ccaagttctc ctccttcact 300
tcgttacaaa ccacggggaa gagcccaccg tgagaacgcg ccatctgcaa gctgtctccc 360
tttctccatc cttggtgaaa ccctttgcgc agaaggcaac gtggaagctg atgtttttac 420
tcatctcgct gtttgaaagc accattatga agtcgggttg tacagtagtt aacagtacct 480
tttatatata tatctcatat ctatcatata tatataaact gtaaacaaga ggtaa 535
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<210> 37

<211> 428

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (12)..(12)

<223> May be any nucleic acid

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<221> Unsure

<222> (15)..(15)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (415)..(415)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (424)..(424)

<223> May be any nucleic acid

<400> 37

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ctggattagt tctgatccca ccacaaggag ccctcgaatt ggctaaagtg agaaactggg 120
cctgaagact ccgtaccctc tgccatcttg ccgagggagt ctctttttag aaaacaatca 180
aagggttatt gcatgagtct ggatgaatcc cactctcagc tgtccacggg cccgaccacc 240
tcatctagcc cccttttttg caggggagaac ctgggctccc aagttctcct ccttcacttc 300
gttacaaaacc aagggggaagg agcccaccgt gagaacggcg ccatcttgca agctgtctcc 360
ctttctccat ccttgggtga aacccttttg cgcagaaggg caacgtggga agctngatgt 420
ttntaac 428
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<210> 38

<211> 419

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (306)..(306)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (325)..(325)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (341)..(341)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (367)..(367)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (385)..(385)

<223> May be any nucleic acid

<400> 38

atgggcggtta gtgacaagag ggacatctcg cgatttctcg agtccaaccc tgtgatgatt 60
gatgccaaag aagtgtcagc tgcacacagg gcccgctact tctggggtaa ccttcccggg 120
atgaacaggc cgttggatcc actgtgaatg ataagctgga gctgcaggag tgtctggagc 180
atggcaggat agccaagttc agcaaagtga ggaccattac tacgaggtca aactccataa 240
agcagggcaa agaccagcat tttcctgtct tcatgaatga gaaagaggac atcttatggt 300
gcactnaaat tggaaagggt atttnggggt tcccagtgca ntatactgac gtctccaaca 360
tgagccnctt tgggagggca gagantgctg gggccgggtc atgggagcgt gcccggttc 419

<210> 39

<211> 437

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (2)..(2)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (11)..(11)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (23)..(23)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (76)..(76)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (224)..(224)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (290)..(290)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (362)..(362)

<223> May be any nucleic acid

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<221> Unsure

<222> (376)..(376)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (386)..(386)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (426)..(426)

<223> May be any nucleic acid

<400> 39

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cactcaggcg gcacanttcc ctcccagcca ctgagctgtc gtgccagcac cattcctggt 120
cacgcaaaac agaaccagc tagcagcagg gagacgagaa caccacacaa gacatttttc 180
tacagtatct caggtgccta ccacacagga aaccttgaag aaantcagtt tctaggaagc 240
cgctgttacc tcttggttac agtttatata tatatgatag atatgagatn tatatataaa 300
agggtactgtt aactactgta caaccgact tcataatggg tgctttcaaa caggcgaggt 360
gngtaaaaaac atcagnttcc acgttngcct tttgcgcaaa gggtttcacc aggttgggga 420
aaggnggaca gctttttt 437
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<210> 40

<211> 385

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (340)..(340)

<223> May be any nucleic acid

<220>
<221> Unsure
<222> (365)..(365)
<223> May be any nucleic acid

<220>
<221> Unsure
<222> (376)..(376)
<223> May be any nucleic acid

<400> 40
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tctggattag ttctgatccc accacaagga gccctcgaat tggctaaagt gagaaactgg 120
gcctgaagac tccgtaccct ctgccatctt gccgagggag tctcctttta gaaaacaatc 180
aaagggttat tgcattgagtc tggatgaatc ccactctcag ctgtccacgg gcccgaccac 240
ctcatctagc cccctttttg gcagggagaa cctgggctcc caagttctcc tccttcaactt 300
cgttacaaac caaggggaag agcccaccgt gagaacgcgn catctgcaag ctgtctccct 360
ttttncatcc ttggtngaaa ccctt 385

<210> 41
<211> 294
<212> DNA
<213> Homo sapiens

<220>
<221> Unsure
<222> (66)..(66)
<223> May be any nucleic acid

<220>
<221> Unsure
<222> (73)..(73)
<223> May be any nucleic acid

<220>
<221> Unsure
<222> (267)..(267)
<223> May be any nucleic acid

<400> 41
aaagggtggga gagaggaaaa aaggaaattc tatagaaatc tatatatattgg gttgtttttt 60
tttttntttt ttnttttttt ttttttgggt tttttttttt tactatatat cttttttttg 120
ttgtctctag cctgatcaga taggagcaca agcaggggac ggaaagagag agacactcag 180
gcggcacatt tgccctccca gccactgagc tgtcgtgccg gcaccattcc tgggtcacgc 240
aaaacagaac ccagtttagc gcaggggnaga cgagaacacc acacaagaca tttt 294

<210> 42
<211> 610
<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (576)..(576)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (590)..(590)

<223> May be any nucleic acid

<400> 42

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tctggattag ttctgatccc accacaagga gccctcgaat tggctaaagt gagaaactgg 120
gcctgaagac tccgtaccct ctgccatctt gccgaggag tctcctttta gaaaacaatc 180
aaaggggttat tgcattgagtc tggatgaatc ccactctcag ctgtccacgg gcccgaccac 240
ctcatctagc cccctttttg gcaggagaaa cctggctccc aagttctcct ccttcacttc 300
gttacaaaacc aaggggaaga gccaccgtg agaacgcgcc atctgcaagc tgtctccctt 360
tctccatcct ttggtggaaa cccttttgcg cagaaggcaa cgtggaagct gatgttttta 420
ctcatctcgc tgtttgaaag caccattatg aagtcgggtt gtacagtagt taacagtacc 480
ttttatatat atatctcata tctatcatat atatataaac tggtaaacia gaggtaacag 540
cgggcttcta gaaactgatt ttcttcaagg ttccnngtgt ggtaggcacn tgaaatactg 600
gtagaaaatg 610
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<210> 43

<211> 283

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (72)..(72)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (272)..(272)

<223> May be any nucleic acid

<400> 43

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taactttgtg tcgctacctc agtttgcccc catgtccctt acacacacgc aaaatactcc 60
ttcagcggag anacgaggtg gcggatgact ggcacgctcc atgaccggcc cagcagtctc 120
tgccctcgcca agcgggtcat gttggagacg tcagtatagt ggactgggaa accaaatacc 180
ctttccatctt cagtgcacca taagatgtcc tctttctcat tcatgaagac aggaaaaatg 240
ctggtctttg gcctgcttta tggagttttg anctcgtaag taa 283
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<210> 44

<211> 383

<212> DNA

<213> Homo sapiens

<400> 44

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gcggggacgt cgcagcgtc acacagaagc atatccagga gtggggccca ttcgatctgg 60
tgattggggg cagtcctgc aatgacctct ccacgtcaa cctgctcgc aagggcctct 120
acgagggcac tggccggctc ttctttgagt tctaccgct cctgcatgat gcgcggccca 180
aggagggaga tgatcgcccc ttctctggct ctttgagaat ttggtggcca tggcgtagt 240
acacagagag gacacatctc gcgatttctc gagtccaacc ctgtatatga ttgatgcca 300
agaagtctca tctgcacaga ggccccctcta cttctggggg cacctccccg tattaacagg 360
ccgtaggatc cactgttatt ata 383
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<210> 45

<211> 447

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (445)..(445)

<223> May be any nucleic acid

<400> 45

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ctggattagt tctgatccca ccacaaggag ccctcgaatt ggctaaagt agaaactggg 120
cctgaagact ccgtaccctc tgccatcttg ccgagggagt ctcttttttag aaaacaatca 180
aagggttatt gcatgagtct ggatgaatcc cactctcagc tgtccacggg cccgaccacc 240
tcacttaagc cccctttttg gcaggagaa cctggctccc aagttctcct ccttcacttc 300
gttacaaaacc aaggggaaga gccaccgtg agaacgcgcc atctgcaagc tgtctccctt 360
tctccatcct tgggtgaaacc tttgcgcaga aggcaacgtg gaaagctgaa ggtttttact 420
catctcgctg tttgaaaagc accanta 447
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<210> 46

<211> 100

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (96)..(96)

<223> May be any nucleic acid

<400> 46

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acaccaagaa catgagggat ggagagaagt atcagcacc agaagagaaa aaggaattta 60
aaacaaaaac cacagaggcg gaaataccgg tgactnttct 100
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<210> 47

<211> 150

<212> DNA

<213> Homo sapiens

<400> 47

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tactccttca gcgggtagga ggtggcgat gactggcacg ctccatgacc ggcccagcag 60
tctctgcctc gccaaagcgt catgttggag aggtcagtat agtggactgg gaaaccaa 120
accctttcca tttcagtgc ccataagatg                                     150
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<210> 48

<211> 237

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (7)..(7)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (42)..(42)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (45)..(45)

<223> May be any nucleic acid

<400> 48

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gctgtcncag ggggtgtgtg gtctaggagc ctggctggag gncancgctg ggtgggagct 60
tgggacaccg atgggcctgc atctgacctg ttgtgctcac tgcttaggac cctccaaagg 120
tttaccacc tgtcccagct gagaagagga agcccatccg ggtgctgtct ctctttgatg 180
gaatcgctac aggtgagggg tgcaggccca agaggtgctg gcctcgtgcg aattcct 237
```

<210> 49

<211> 442

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (19)..(19)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (91)..(91)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (137)..(137)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (388)..(388)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (397)..(397)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (428)..(428)

<223> May be any nucleic acid

<400> 49

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ttttttacta tatacttnt ttttggtgtc tctagcctga tcagatagga gcacaagcag 60
gggacggaaa gagagagaca ctccaggcggc natttcctc ccagccactg agctgtcgtg 120
ccagcaccat tcctggncac gcaaacaga acccagttag cagcagggag acgagaacac 180
cacacaagac atttttctac agtatttcag gtgcctacca cacaggaaac cttgaagaaa 240
atcagtttct aggaagccgc tgttacctct tgtttacagt ttatatatat atggatagga 300
tatgaggata tatatataaa aggggtactgt ttaactactg taccaaccg actttcataa 360
tgggtgcttt tcaaacagcc gaggatgngg ttaaaancat cagcttcac gttgccttct 420
gcggcaangg gtttcaccag gg 442
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<210> 50

<211> 395

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (343)..(343)

<223> May be any nucleic acid

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<221> Unsure

<222> (372)..(372)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (379)..(379)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (384)..(384)

<223> May be any nucleic acid

<400> 50

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tctggattag ttctgatccc accacaagga gccctcgaat tggctaaagt gagaaactgg 120
gcctgaagac tccgtaccct ctgccatctt gccgaggag tctcctttta gaaaacaatc 180
aaaggggttat tgcattgagtc tggatgaatc ccactctcag ctgtccacgg gcccgaccac 240
ctcatctagc cccctttttg ggcagggaga aacctgggct cccaagttct cctccttcac 300
ttcgttaaca aaccaagggg aagagccac cgtgaggaac ggngccatct ggcaagggtg 360
ttctcccttt tnttccatnc cttnggtgaa aacct 395
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<210> 51

<211> 835

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (2)..(9)

<223> May be any nucleic acid

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<221> Unsure

<222> (11)..(16)

<223> May be any nucleic acid

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<221> Unsure

<222> (19)..(21)

<223> May be any nucleic acid

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<221> Unsure

<222> (32)..(32)

<223> May be any nucleic acid

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<221> Unsure

<222> (37)..(37)

<223> May be any nucleic acid

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<221> Unsure

<222> (46)..(46)

<223> May be any nucleic acid

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<221> Unsure

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<222> (62)..(63)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (75)..(76)

<223> May be any nucleic acid

<220>
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<222> (120)..(120)
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<221> Unsure
<222> (140)..(140)
<223> May be any nucleic acid

<220>
<221> Unsure
<222> (146)..(146)
<223> May be any nucleic acid

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<222> (595)..(595)

<223> May be any nucleic acid

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<223> May be any nucleic acid

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<221> Unsure

<222> (710)..(710)

<223> May be any nucleic acid

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 <223> May be any nucleic acid

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 <223> May be any nucleic acid

<220>
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 <222> (832)..(832)
 <223> May be any nucleic acid

<400> 51
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 tacctcagtt tgcccccatn tccctnacac acacgcaaaa tactccttca gcggagcgaa 180
 gaggtggcgg atgactggna cgctccatga ccggcccagc agtctctgcc tcgccaagcg 240
 gatcatgttg gagacgtcag tatagtggac tgggaaacca aatacccttt ccatttcagn 300
 gcaccataag atgtcctctt totcattcat gaagacaggg aaaatgctgg tctttggcct 360
 gctcnatgga gtttgactcc gtagtaangg ccctcanttt ggntgacttg ggctatcctg 420
 ncatgctcca gacacttccg nagggtcaca acagaagcat nttccagggg gtggngggca 480
 ttccgacctt tggnggattg ggggggaagc ccnaaaaaat aacccttca aacggnaaaa 540
 cctngttcn gaangggccc cnttnccgang ggaaactggn ccgnttnttt ctttngggnt 600
 tcctcccccc cccccnaaa ataatggng gccccagna ggggaattac ccccccn 660
 ttnttttttt tttggaaatt tgggggcccg ggggnnaann naaaanggc acttcnnnt 720
 ttttggnc nccnnnant ttnncccaa aaanntaat taaaaaggcc cttttctggg 780
 nccccnttn aaccgccccn ngatnggtnc ttggttcccn aacacannnn cncaa 835

<210> 52
 <211> 479
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (364)..(364)
 <223> May be any nucleic acid

<220>
 <221> Unsure
 <222> (416)..(416)
 <223> May be any nucleic acid

<220>
 <221> Unsure

<222> (464)..(464)

<223> May be any nucleic acid

<400> 52

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tctggattag ttctgatccc accacaagga gccctcgaat tggctaaagt gagaaactgg 120
gcctgaagac tccgtaccct ctgccatctt gccgaggag tctcctttta gaaaacaatc 180
aaagggttat tgcattgagtc tggatgaatc ccactctcag ctgtccacgg gcccgaccac 240
ctcatctagc cccctttttg gcaggagaga cctggctccc aagttctcct ccttcacttc 300
gttacaacc aaggggaaga gccaccatg agaacgcgcc atctgcaagc tgtctccctt 360
tctnctcct tggtgaaacc tttgcgcaga aggcaacgtg gaagctgatg tttttntcat 420
ctcgtgttt gaaagcacca ttatgaagtc gggttgtaca gtantaacag tacttttag 479
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<210> 53

<211> 521

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (327)..(327)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (507)..(507)

<223> May be any nucleic acid

<400> 53

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agaacaccac acaagacatt tttctacagt atttcaggtg cctaccacac aggaaacctt 60
gaagaaaatc agtttctaga agccgctgtt acctcttggt tacagtttat atatatatga 120
tagatatgag atatatatat aaaagggtact gttaactact gtacaaccgc acttcataat 180
ggtgctttca aacagcgaga tgagtaaaaa catcagcttc cacgttgccct tctgcgcaaa 240
gggtttcacc aaggatggag aaaggagac agcttgcaga tggcgcgttc tcatgggtggg 300
ctcttccct tggtttgtaa cgaagtntag gaggagaact tgggagccag gttctccctg 360
ccaaaaaggg ggctagatga ggtggtcggg cccgtggaca gctgagagtg ggattcatcc 420
agactcatgc aataaccctt tgattgtttc taaaaggaga ctccctcggc aagatggcag 480
agggtacgga gtcttcaggc ccagttntca ctttagccaa t 521
```

<210> 54

<211> 440

<212> DNA

<213> Homo sapiens

<400> 54

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ctctctttga tggaatcgct acagggctcc tgggtgctgaa ggacttgggc attcaggtgg 60
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accgctacat tgcctcggag gtgtgtgagg actccatcac ggtgggcatg gtgcggcacc 120
aggggaagat catgtacgtc ggggacgtcc gcagcgtcac acagaagcat atccaggagt 180
ggggccatt cgatctgggtg attgggggca gtccctgcaa tgacctctcc atcgtcaacc 240
ctgctcgcaa gggcctctac gagggcactg gccggctctt ctttgagttc taccgcctcc 300
tgcatgatgc gcggcccaag gagggagatg atcgcccctt cttctggctc tttgagaatg 360
tggtggccat gggcgtttag tgacaagagg gacatctcgc gatttctcga gtccaaccct 420
gtgatgattg atgccaaaga                                     440

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<210> 55

<211> 273

<212> DNA

<213> Homo sapiens

<400> 55

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acgttttcta tgttttttta tttgctccag gtgggggttt gactgtcact ttcccacact 60
ctggattagt tctgatccca ccacaaggag ccctcgaatt ggctaaagtg agaaactggg 120
cctgaagact ccgtaccctc tgccatcttg ccgagggagt ctccttttag aaaacaatca 180
aagggttatt gcatgagtct ggatgaatcc cactctcagc tgtccacggg cccgaccacc 240
tcatctagcc cccttttttg cagggagaac ctg                                     273

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<210> 56

<211> 190

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (39)..(39)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (83)..(83)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (181)..(181)

<223> May be any nucleic acid

<400> 56

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aaaaacacaa aacataataa aacaccaaga acatgaggnt ggagagaagt atcagcacc 60
agaagagaaa aaggaattta aancaaaaac cacagaggcg gaaataccgg agggctttgc 120
cttgcgaaaa gggttggaca tcatctcctg atttttcaat gttattcttc agtcctat 180
naaaacaaag                                     190

```

<210> 57

<211> 445

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (167)..(167)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (353)..(353)

<223> May be any nucleic acid

<400> 57

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gcctaaaaat tagcaaaaac tgttgaaaaca aggcacagtt ttttcccat atttgttacg 120
tcgtggctcc agttacaaaa aaattttaat gaaaacgtta aacatanaaa tagaagtttg 180
agatttttaa aagtgtataa aaagccccac aaaacttgtc aacggttggt ccttattcta 240
caaaatagca ccagtaagaa gagtaaaaagg tgttaaaaac catttatgac agcatttctg 300
aatgcagct tgtctgaatt cccggttctc cctaaaaacg acttctttat ggnattaaaa 360
aagggtttta aaaaatctcc aaaggggagc accgagcttt gcaggttttc cctgtcatct 420
ctcagatgtg ggggaagctc gtggc 445
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<210> 58

<211> 287

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (38)..(38)

<223> May be any nucleic acid

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<221> Unsure

<222> (171)..(171)

<223> May be any nucleic acid

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<221> Unsure

<222> (204)..(204)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (274)..(274)

<223> May be any nucleic acid

<400> 58

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ttccccacat ctgagagatg acagggaaaa ctgcaaantc cggtgctccc tttggagatt 60
ttttaatcct tttttattcc ataagaagtc gtttttaggg agaacgggaa ttcagacaag 120
```

ctgcatttca gaaatgctgt cataatgggtt tttaacacct tttactcctc nttactggtg 180
ctatttttgt agaataaggg aacnacgttg acaagttttg gtgggggcct ttttatacac 240
cttttttaaa atctccaact tcctaatttt taanggttta accgttt 287

<210> 59

<211> 535

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (452)..(452)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (526)..(526)

<223> May be any nucleic acid

<400> 59

tagacaaata ctgattttta ttaaacataa ggtaaactct aggcattccgt catcttttcag 60
cctaaaaatt agcaaaaact gttgaaacaa ggcacagttt tttccccata tttgttacgt 120
cgtggctcca gttacaaaaa aattttaatg aaaacgttaa acataaaaaat agaagtttga 180
gatttttaaaa agtggtataaa aagccccaca aaacttgtca acgttggtcc ttattctaca 240
aaatagcacc agtaagaaga gtaaaagggtg ttaaaaacca ttatgacagc atttctgaaa 300
tgcagcttgt ctgaattccc gttctcccta aaaacgactt cttatggaat aaaaaaggat 360
taaaaaatct ccaaaggag caccgagctt tgcagttttc cctgtccgtc tctcagatgt 420
ggggaaggta tgagaaatgt atgtctgtcc cngactgctg tcaactgcctc tgagttagta 480
aaagggtgaga atgagggtag cagcttccca tctggggcct gtgccngtgg aggggt 535

<210> 60

<211> 449

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (7)..(7)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (200)..(200)

<223> May be any nucleic acid

<400> 60

atcgcancag gctacctagt cctcaaagag ttgggcataa aggtaggaaa gtacgtcgct 60
tctgaagtgt gtgaggagtc cattgtctgtt ggaaccgtga agcacgaggg gaatatcaaa 120
tacgtgaacg acgtgaggaa catcacaag aaaaatattg aagaatgggg cccatttgac 180

```

ttggtgattg gcggaaccan tgcaacgatc tctcaaagt gaatccagcc aggaaaggcc 240
tgtatgaggg tacaggccgg ctcttcttcg aattttacca cctgctgaat tactcacgcc 300
ccaaggaggg tgatgaccgg ccgttcttct ggatgtttga gaatgttgta gccatgaagg 360
ttggcgacaa gagggacatc tcacggttcc tggagtgtaa tccagtgatg attgatgcca 420
tccaaagttt ctgctgctca cagggcccg                                     449

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<210> 61

<211> 522

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (146)..(146)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (281)..(281)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (304)..(304)

<223> May be any nucleic acid

<400> 61

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aagagggaca tctcacggtt cctggagtgt aatccagtga tgattgatgc catcaaagtt 60
tctgctgctc acagggcccg atacttctgg ggcaacctac ccgggatgaa caggcccggtg 120
atagcatcaa agaatgataa actcngctg caggactgct tggaatacaa taggatagcc 180
aagttaaaga agtacagac aataaccacc aagtcgaact cgatcaaaca ggggaaaaaac 240
caacttttcc ctgttgatc gaatggcaaa gaagatgttt ngtggtgcac tgagctcgaa 300
aggntctttg gctttcctgt gcactacaca gacgtgtcca acatgggccg tggtgcccg 360
cagaagctgc tgggaaggtc ctggagcgtg cctgtcatcc gacacctctt cgccctctg 420
aaggactact ttgcatgtga atagttccag ccaggggcca agcccactgg ggtgtgtggc 480
agagcaggac ccaggaggtg tgattctgaa ggcaccccca gg                                     522

```

<210> 62

<211> 573

<212> DNA

<213> Homo sapiens

<400> 62

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ctaagatcca ttttctaaac tccaattgag cattctctgt atctgggtgg tttttacttt 60
tttacttaat cttgcttgat caggaactct ggtgtcttct tggcccccca cgtgatctcg 120
ttcatggtca cttttttgtt tatctcattt tctctgaggc tggtccttcc tgtaaacgtc 180
ttggcatttg tgggaagcac aaaatgttct tgccctcca actctgcttt tcgctccctg 240

```

```
ccctgccatt cctctcccg cgcctgccctc tcccttccat ctttcccagg tacttttctc 300
tcccagccct gccactcttc tgccgcacct gcgctctccc ctccatcttt cccaggtact 360
tttgagcctt gactccccag gtcccttcat tctgtgtctca ctccatgatg tcattttgtt 420
ctccagttaa agaaagtaca gacaataacc accaagtcga actcgatcaa acaggggaaa 480
aaccaacttt tccctgttgt catgaatggc aaagaagatg ttttgtggtg cactgagctc 540
gaaaggatct ttggctttcc tgtgcactac aca 573
```

<210> 63

<211> 559

<212> DNA

<213> Homo sapiens

<400> 63

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agacaaatac tgattttaat taaacataag gtaaactcta ggcatccgtc atctttcagc 60
ctaaaaatta gcaaaaactg ttgaaacaag gcacagtttt tccccatat ttgttacgtc 120
gtggctccag ttacaaaaaa attttaatga aaacgttaaa cataaaaaata gaagtttgag 180
attttaaaaa gtgtataaaa agccccacaa aacttgtcaa cgttgttcct tattctacaa 240
aatagcacca gtaagaagag taaaagggtg taaaaacat tatgacagca tttctgaaat 300
gcagcttgtc tgaattcccg ttctccctaa aaacgacttc ttatggaata aaaaaggatt 360
aaaaaatctc caaagggagc accgagcttt gcagttttcc ctgtcatcta tcagatgtgg 420
ggaaggtatg agaaatgtat gtctgtccct gactgctgtc actgcctctg agtttagtaa 480
aaagatgaga aatgagggta gcagacttct catctgggga cctgtgcctg tggagggtag 540
gtctcctgga gagggaatg 559
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<210> 64

<211> 391

<212> DNA

<213> Homo sapiens

<400> 64

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ttttttttta gacaaatact gattttaatt aaacataagg taaactctag gcacccgtca 60
tctttcagcc taaaaattag caaaaactgt tgaaacaagg cacagttttt tccccatatt 120
tgttacgtcg tggctccagt tacaaaaaaa attttaatga aaacgttaaa cataaaaaata 180
gaagtttgag attttaaaaa gtgtataaaa agccccacaa aacttgtcaa cgttgttcct 240
tattctacaa aatagcacca gtaagaagag taaaagggtg taaaaacat tatgacagca 300
tttctgaaat gcagcttgtc tgaattcccg ttctccctaa aaacgacttc ttatggaata 360
aaaaaggatt aaaaaatctc caaagggagc a 391
```

<210> 65

<211> 517

<212> DNA

<213> Homo sapiens

<400> 65

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acaaataactg attttaatta aacataaggt aaactctagg caggggcac tttcagccta 60
aaaatttagca aaaactgttg aaacaaggca cagttttttc cccatatttg ttacgtcgtg 120
gctccagtta cggaaaaatt ttaatgaaaa cgtaaacaat aaaaatagaa gtttgagatt 180
ttaaaaaagtg tataaaaaagc cccacaaaac ttgtcaacgt tggttccttat tctacaaaat 240
agcaccagta agaagagtaa aaggtgttaa aaaccattat gacagcattt ctgaaatgca 300
gcttgtctga attcccgttc tccctaaaaa cgacttctta tggaataaaa aaggattaaa 360
aaatctccaa agggagcacc gagctttgca gttttccctg tcatctctca gatgtgggga 420
aggtatgaga aatgtatgtc tgtccctgac tgctgtcact gcctctgagt ttagtaaaaa 480
gatgagaaat gagggtagca gacttctcat ctgggga 517

```

<210> 66

<211> 442

<212> DNA

<213> Homo sapiens

<400> 66

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gacaaatact gatTTtaatt aaacataagg taaactctag gcatccgtca tctttcagcc 60
taaaaatttag caaaaactgt tgaaacaagg cacagttttt tccccatatt tgttacgtcg 120
tggtccagct tacaaaaaaa attttaatga aaacgttaa cataaaaaata gaagtttgag 180
attttaaaaa gtgtataaaa agccccacaa aacttggtcaa cgttgttctt tattctacaa 240
aatagcacca gtaagaagag taaaagggtg taaaaacat tatgacagca tttctgaaat 300
gcagcttgct tgaattcccg ttctccctaa aaacgacttc ttatggaata aaaaaggatt 360
aaaaaatctc caaaggagc accgagcttt gcagttttcc ctgtcatctc gcagatgtgg 420
ggaagggtatg agaaatgtat gt 442

```

<210> 67

<211> 396

<212> DNA

<213> Homo sapiens

<400> 67

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gcagtcaggg acagacatac atttctcata ctttccccac atctgagaga tgacagggaa 60
aactgcaaag ctcggtgctc ctttggaga ttttttaatc cttttttttt ccataagaag 120
tcgttttttag ggagaacggg aattcagaca agctgcattt cagaaatgct gtcataatgg 180
tttttaacac cttttactct tcttactggt gctattttgt agaataagga acaacgttga 240
caagttttgt ggggcttttt atacactttt taaaatctca aacttctatt tttatgttta 300
acgttttcat taaaattttt ttgtaactgg agccacgacg taacaaatat ggggaaaaaa 360
ctgtgccttg tttcaacagt ttttgcta ttttag 396

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<210> 68

<211> 287

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (7)..(7)

<223> May be any nucleic acid

<220>

<221> Unsure

<222> (169)..(169)

<223> May be any nucleic acid

<400> 68

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agacaantac tgattttaat taaacataag gtaaactcta ggcattccgtc atctttcagc 60
ctaaaaatta gcaaaaactg ttgaaacaag gcacagtttt tccccatat ttgttacgtc 120
gtggctccag ttacaaaaaa aattttaatg aaaacgttaa acataaaaant agaagtttga 180
gattttaaaa agtgtataaa aagccccaca aaacttgtca acgttggttc ttattctaca 240
aatagcacc agtaagaaga gtaaaagggtg ttaaaaacca ttatgac 287
```

<210> 69

<211> 356

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (193)..(193)

<223> May be any nucleic acid

<400> 69

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attgaagaat gggggccatt tgacttggtg attggcggaa ccgatgcaac gatctctcaa 60
atgtgaatcc agccaggaaa ggctgtatg agggtagagg ccggctcttc ttcgaaat 120
accacctgct gaattactca cgcccaagg agggtagatga ccggccgttc ttctggatgt 180
ttgagaatgt tgnagccatg aaggttggcg acaagaggga catctcacgg ttctggagt 240
gtaatccagt gatgattgat gccatcaaag tttctgctgc tcacagggcc cgatacttct 300
ggggcaacct acccgggatg aacaggatct ttggctttcc tgtgcactac acagac 356
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<210> 70

<211> 408

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> (408)..(408)

<223> May be any nucleic acid

<400> 70

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agcctaaaaa ttagcaaaaa ctgttgaaac aaggcacagt tttttcccca tatttggtac 120
gtcgtggctc cagttacaaa aaaaatttta atgaaaacgt taaacataaa aatagaagtt 180
tgagatttta aaaagtgtat aaaaagcccc acaaaacttg tcaacgttgt tccttattct 240
acaaaatagc accagtaaga agagtaaaag gtgttaaaaa ccattatgac agcatttctg 300
aaatgcagct tgtctgaatt cccgttctcc ctaaaaacga cttcttatgg aataaaaaag 360
gattaaaaaa tctccaaagg gagcacgag ctttgcagtt ttccctgn 408
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<210> 71
<211> 439
<212> DNA
<213> Homo sapiens

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<222> (405)..(405)
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ggagtctgca cgggacctat tagagtattt tccacaatga tgatgatttc agcaggggatg 180
acgtcatcat cacattcagg gctatttttt cccccacaaa cccaagggca gggggccactc 240
ttagctaaat ccctccccgt gactgcaata gaaccctctg gggagctcag gaaaggggggt 300
gtgctgagtt ctataatata agctgccata tattttgtag acaagtatgg ctctcccat 360
atctccctct tccctaggag aggagtgtga aagcaaggga gcttngataa gacaccccct 420
caaaccatt ccctctcca 439
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<211> 491
<212> DNA
<213> Homo sapiens

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aaactgttga aacaaggcac agttttttcc ccatatttgt tacgtcgtgg ctccagttac 120
aaaaaaaaatt ttaatgaaaa cgtaaacaat aaaaatagaa gtttgagatt ttaaaaagtg 180
tataaaangc cccacaaaac ttgtcaacgt tggttccttat tctacaaaat agcaccagta 240
agaagagtaa aagggtgttaa aaaccattat gacagcattt ctgaaatgca gcttgtctga 300
nttcccgttc tcctataaaa cgacttctta tgggataana aagggattaa aaaatctecn 360
aaaggagggc accgagcttt gcagggtttc cctggtcatc tctcaggatg tggggggagg 420
gtatggggaa atggtatggt ctggtccctg gactggctgg tcaactgcctc tgggggttng 480
gtaaaagggt g 491

<210> 73
<211> 443
<212> DNA
<213> Homo sapiens

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<221> Unsure

<222> (23)..(24)

<223> May be any nucleic acid

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<222> (157)..(157)

<223> May be any nucleic acid

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<222> (170)..(170)

<223> May be any nucleic acid

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<222> (341)..(341)

<223> May be any nucleic acid

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<221> Unsure

<222> (347)..(347)

<223> May be any nucleic acid

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<222> (371)..(371)

<223> May be any nucleic acid

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<221> Unsure

<222> (405)..(405)

<223> May be any nucleic acid

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<221> Unsure

<222> (412)..(412)

<223> May be any nucleic acid

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<221> Unsure

<222> (430)..(430)

<223> May be any nucleic acid

<400> 73

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aggcggtctt tcttcgaatt ttccacctgc tgaattactc acgccccaaag gaggggtgatg 120
accggncggt cttctggatg tttgagaatg ttgtagncat gaagggttggg gacaagaggg 180
acatctcacg gttcctggag tgtaatccag tgatgattga tgccatcaaa gtttctgctg 240
ctcacagggc cggatacttc tggggcaacc taccggggat gaacaggatc tttggctttc 300

ctgtgcacta cacagacgtg tcccaacatg gggccgtggg ngccgcncca ggaagcttgc 360
tggggaaggt nctggggagc gttgccttgt tcatcccgac acctntttcg gncctattg 420
gaagggattn atttttgcca tgt 443

<210> 74
<211> 273
<212> DNA
<213> Homo sapiens

<400> 74
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ctggattagt tctgatccca ccacaaggag ccctcgaatt ggctaaagtg agaaactggg 120
cctgaagact ccgtaccctc tgccatcttg ccgagggagt ctccttttag aaaacaatca 180
aagggttatt gcatgagtct ggatgaatcc cactctcagc tgtccacggg cccgaccacc 240
tcatctagcc cccttttttg cagggagaac ctg 273

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<212> DNA
<213> Homo sapiens

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<222> (33)..(33)
<223> May be any nucleic acid

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<222> (188)..(188)
<223> May be any nucleic acid

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aaactgttga aacaaggcac agttttttcc ccatatttgt tacgtcgtgg ctccagttac 120
aaaaaaaaatt ttaatgaaaa cggttaaacad aaaaatagaa gtttgagatt ttaaaaagtg 180
tataaaangc cccacaaaac ttgtcaacgt tggttccttat tctacaaaat agcaccagta 240
agaagagtaa 250

<210> 76
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<212> DNA
<213> Homo sapiens

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<223> May be any nucleic acid

<400> 76

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accggnctgt cttctggatg tttgagaatg ttgtagncat gaagggttggg gacaagaggg 180
acatctcacg gttcctggag tgtaatccag tgatgattga tgccatcaaa gtttctgctg 240
ctcacagggc ccgatacttc tggggcaacc taccgggat gaacaggatc tttggctttc 300
ctgtgcacta cacagacgtg tcccaacatg gggccgtggg ngccgcacca ggaagcttgc 360
tggggaaggt nctggggagc gttgccttgt tcatcccgac acctntttcg gncctattg 420
gaagggattn atttttgcca tgt 443
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<210> 77

<211> 394

<212> DNA

<213> Homo sapiens

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<400> 77

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agaattatga agcataaaag gaaattattg gcttttggag agttttcttt tctctcttct 180
ttttttgtaa tttcaatcta tatcagtagt ggaaagggtca tagcaaaata tggagaatcc 240
aaatggtaga tacaacctga tatcttgttg aacaaggcat acaacagcaa agcaacacca 300
gtgaaaccaa ggacaccaa cagtccccag agaactccag ctgtcatgag gtctcttcta 360
tagccatcag gtcttgagat ggagactggc actg 394
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<210> 78

<211> 277

<212> DNA

<213> Homo sapiens

<400> 78

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tatttgttac gtcgtggctc cagttaccaaa aaaattttta tgaaaacgtt aaacataaaa 120
atagaagttt gagattttta aaagtgtata aaaagcccca caaaacttgt caacgttggt 180
ccttattcta caaaatagca ccagtaagaa gagtaaaagg tgtaaaaaac cattatgaca 240
gcatttctga aatgcagctt gtctgaattc ccgttct 277
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<210> 79

<211> 469

<212> DNA

<213> Homo sapiens

<400> 79

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cagcctaaaa attagcaaaa actggtgaaa catggcacag ttttttcccc atatttggtta 120
cgtcgtgggt ccagttacaa aaaaatttta atgaaaacgt taaacataaa aatagaagtt 180
tgagatttta aaaagtgtat aaaaagcccc acaaaacttg tcaacgttgt tccttattct 240
acaaaatagc accagtaaga agagtaaaag gtgttaaaaa ccattatgac agcatttctg 300
aaatgcagct tgtctgaatt cccgttctcc ctaaaaacga cttcttatgg aataaaaaag 360
gattaaaaaa tctccaaagg gagcacggag ctttgcagtt ttccctgtca tctctcagat 420
gtggggaagg tatgagaaat gtatgtctgt ccctgactgc tgtcactgc 469
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<210> 80

<211> 206

<212> DNA

<213> Homo sapiens

<400> 80

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gacaaatact gatccccctt acacataagg taaactctag gcattcgtca tctttcagcc 60
taaaaattag caaaaactgt tgaacaagg cacagttttt tcccatatt tggtacgtcg 120
tggtccagct tacgaaaaaa attttaatga aaacgttaaa cataaaaaata gaagtttgag 180
attttaaaaa gtgtataaaa agcccc 206
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<210> 81

<211> 391

<212> DNA

<213> Homo sapiens

<400> 81

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tttttagacaa atactgattt taattaaaca taaggtaaac tctaggcatc cgtcattctt 60
cagcctaaaa attagcaaaa actggtgaaa caaggcacag ttttttcccc atatttggtta 120
cgtcgtgggt ccagttacaa aaaaaatttt aatgaaaacg ttaaacataa aatagaagt 180
ttgagatttt aaaaagtgtt taaaagcccc cacaaaactt gtcaacgttg ttcttattc 240
tacaaaatag caccagtaag aagagtaaaa ggtgttaaaa accattatga cagcatttct 300
gaaatgcagc ttgtctgaat tccggttctc cctaaaaacg acttcttatg gaataaaaaa 360
ggattaaaaa atctccaaag ggagcaccga g 391
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<211> 755

<212> DNA

<213> Homo sapiens

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tttttctttg gggngngnnc ccccccngnc cccccnngn tntnttttn nntttnnncn 180
ngtcncccg nnnngggtnc tcacncactt cagangngnn gggctntcct nccnttntgg 240
ccnctcttt gcgatngnt aggtgtgc gatgncatca aacaatgaca ggactcgnct 300
nggcgccttc gggctgcggg aatgggagga tctttggntt tctgtgcac tacacagacg 360
tgtccaacat gggncgtggt gnccgccaga agcttgctgg ggaaggctct tggagnggtg 420
tcttgtcaat cccganaacc tctttccggc ccccttgga aggggcttac ttctgggaat 480
ngttgnattt ggtcccangc cnangggccc caaaaggccc ccantttngg gggttgtttt 540
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ggaattcccc cccangggnc ccngntntt nttcccncc aantttttgg ggttnggggt 660
tanaananc cggggggttc ccccccaagg cccccctct ntttgggttc aaaaangggg 720
gggggggaag gggcccccnc cctgaanttt ttttc 755

<210> 83

<211> 2318

<212> DNA

<213> Mus musculus

<400> 83
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gagaagaaag ccaaggtaat tgcagtaatg aatgctgtgg aagagaacca ggcctctgga 180
gagtctcaga aggtggagga ggccagccct cctgctgtgc agcagcccac ggaccctgct 240
tctccgactg tggccaccac ccctgagcca gtaggagggg atgctgggga caagaatgct 300
accaaagcag ccgacgatga gcctgagtat gaggatggcc ggggctttgg cattggagag 360
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aagttctcag tgggtgtgtg ggagaagctc atgccgctga gtccttctg cagtgcattc 540
caccaggcca cctacaacaa gcagcccatg taccgcaaag ccatctacga agtcctccag 600
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cagccctcgg gtccctaagg cctggagcca ccagaagaag agaagaatcc ttacaaggaa 780
gtttacaccg acatgtgggt ggagcctgaa gcagctgctt acgccccacc cccaccagcc 840
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gccattaagg aagaccctg gaactgctac atgtgcgggc ataagggcac ctatgggctg 1260
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caggaatttg acccccaaa ggtttacca cctgtgccag ctgagaagag gaagcccatc 1380
cgctgctgt ctctctttga tgggattgct acagggtcc tgggtgctgaa ggacctgggc 1440
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gtgcggcacc agggaaagat catgtacgtc ggggacgtcc gcagcgtcac acagaagcat 1560
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<210> 84

<211> 2371

<212> DNA

<213> Homo sapiens

<400> 84

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<211> 689

<212> PRT

<213> Mus musculus

<400> 85

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Pro Thr Val Ala Thr Thr Pro Glu Pro Val Gly Gly Asp Ala Gly Asp
35 40 45

Lys Asn Ala Thr Lys Ala Ala Asp Asp Glu Pro Glu Tyr Glu Asp Gly
50 55 60

Arg Gly Phe Gly Ile Gly Glu Leu Val Trp Gly Lys Leu Arg Gly Phe
65 70 75 80

Ser Trp Trp Pro Gly Arg Ile Val Ser Trp Trp Met Thr Gly Arg Ser
85 90 95

Arg Ala Ala Glu Gly Thr Arg Trp Val Met Trp Phe Gly Asp Gly Lys
100 105 110

Phe Ser Val Val Cys Val Glu Lys Leu Met Pro Leu Ser Ser Phe Cys
115 120 125

Ser Ala Phe His Gln Ala Thr Tyr Asn Lys Gln Pro Met Tyr Arg Lys
130 135 140

Ala Ile Tyr Glu Val Leu Gln Val Ala Ser Ser Arg Ala Gly Lys Leu
145 150 155 160

Phe Pro Ala Cys His Asp Ser Asp Glu Ser Asp Ser Gly Lys Ala Val
165 170 175

Glu Val Gln Asn Lys Gln Met Ile Glu Trp Ala Leu Gly Gly Phe Gln
180 185 190

Pro Ser Gly Pro Lys Gly Leu Glu Pro Pro Glu Glu Glu Lys Asn Pro
195 200 205

Tyr Lys Glu Val Tyr Thr Asp Met Trp Val Glu Pro Glu Ala Ala Ala
210 215 220

Tyr Ala Pro Pro Pro Pro Ala Lys Lys Pro Arg Lys Ser Thr Thr Glu
225 230 235 240

Lys Pro Lys Val Lys Glu Ile Ile Asp Glu Arg Thr Arg Glu Arg Leu
245 250 255

Val Tyr Glu Val Arg Gln Lys Cys Arg Asn Ile Glu Asp Ile Cys Ile
260 265 270

Ser Cys Gly Ser Leu Asn Val Thr Leu Glu His Pro Leu Phe Ile Gly
275 280 285

Gly Met Cys Gln Asn Cys Lys Asn Cys Phe Leu Glu Cys Ala Tyr Gln
290 295 300

Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys Thr Ile Cys Cys Gly Gly
305 310 315 320

Arg Glu Val Leu Met Cys Gly Asn Asn Asn Cys Cys Arg Cys Phe Cys
325 330 335

Val Glu Cys Val Asp Leu Leu Val Gly Pro Gly Ala Ala Gln Ala Ala
340 345 350

Ile Lys Glu Asp Pro Trp Asn Cys Tyr Met Cys Gly His Lys Gly Thr
355 360 365

Tyr Gly Leu Leu Arg Arg Arg Glu Asp Trp Pro Ser Arg Leu Gln Met
370 375 380

Phe Phe Ala Asn Asn His Asp Gln Glu Phe Asp Pro Pro Lys Val Tyr
385 390 395 400

Pro Pro Val Pro Ala Glu Lys Arg Lys Pro Ile Arg Val Leu Ser Leu
405 410 415

Phe Asp Gly Ile Ala Thr Gly Leu Leu Val Leu Lys Asp Leu Gly Ile
420 425 430

Gln Val Asp Arg Tyr Ile Ala Ser Glu Val Cys Glu Asp Ser Ile Thr
435 440 445

Val Gly Met Val Arg His Gln Gly Lys Ile Met Tyr Val Gly Asp Val
450 455 460

Arg Ser Val Thr Gln Lys His Ile Gln Glu Trp Gly Pro Phe Asp Leu
465 470 475 480

Val Ile Gly Gly Ser Pro Cys Asn Asp Leu Ser Ile Val Asn Pro Ala
485 490 495

Arg Lys Gly Leu Tyr Glu Gly Thr Gly Arg Leu Phe Phe Glu Phe Tyr
500 505 510

Arg Leu Leu His Asp Ala Arg Pro Lys Glu Gly Asp Asp Arg Pro Phe

515		520		525
Phe Trp Leu Phe Glu Asn Val Val Ala Met Gly Val Ser Asp Lys Arg				
530		535		540
Asp Ile Ser Arg Phe Leu Glu Ser Asn Pro Val Met Ile Asp Ala Lys				
545		550		555
Glu Val Ser Ala Ala His Arg Ala Arg Tyr Phe Trp Gly Asn Leu Pro				
		565		570
Gly Met Asn Arg Pro Leu Ala Ser Thr Val Asn Asp Lys Leu Glu Leu				
		580		585
Gln Glu Cys Leu Glu His Gly Arg Ile Ala Lys Phe Ser Lys Val Arg				
		595		600
Thr Ile Thr Thr Arg Ser Asn Ser Ile Lys Gln Gly Lys Asp Gln His				
		610		615
Phe Pro Val Phe Met Asn Glu Lys Glu Asp Ile Leu Trp Cys Thr Glu				
625		630		635
Met Glu Arg Val Phe Gly Phe Pro Val His Tyr Thr Asp Val Ser Asn				
		645		650
Met Ser Arg Leu Ala Arg Gln Arg Leu Leu Gly Arg Ser Trp Ser Val				
		660		665
Pro Val Ile Arg His Leu Phe Ala Pro Leu Lys Glu Tyr Phe Ala Cys				
		675		680

Val

<210> 86

<211> 689

<212> PRT

<213> Homo sapiens

<400> 86

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Glu Glu Ala Ser Pro Pro Ala Val Gln Gln Pro Thr Asp Pro Ala Ser
20 25 30

Pro Thr Val Ala Thr Thr Pro Glu Pro Val Gly Ser Asp Ala Gly Asp
35 40 45

Lys Asn Ala Thr Lys Ala Gly Asp Asp Glu Pro Glu Tyr Glu Asp Gly
50 55 60

Arg Gly Phe Gly Ile Gly Glu Leu Val Trp Gly Lys Leu Arg Gly Phe
65 70 75 80

Ser Trp Trp Pro Gly Arg Ile Val Ser Trp Trp Met Thr Gly Arg Ser
85 90 95

Arg Ala Ala Glu Gly Thr Arg Trp Val Met Trp Phe Gly Asp Gly Lys
100 105 110

Phe Ser Val Val Cys Val Glu Lys Leu Met Pro Leu Ser Ser Phe Cys
115 120 125

Ser Ala Phe His Gln Ala Thr Tyr Asn Lys Gln Pro Met Tyr Arg Lys
130 135 140

Ala Ile Tyr Glu Val Leu Gln Val Ala Ser Ser Arg Ala Gly Lys Leu
145 150 155 160

Phe Pro Val Cys His Asp Ser Asp Glu Ser Asp Thr Ala Lys Ala Val
165 170 175

Glu Val Gln Asn Lys Pro Met Ile Glu Trp Ala Leu Gly Gly Phe Gln
180 185 190

Pro Ser Gly Pro Lys Gly Leu Glu Pro Pro Glu Glu Glu Lys Asn Pro
195 200 205

Tyr Lys Glu Val Tyr Thr Asp Met Trp Val Glu Pro Glu Ala Ala Ala
210 215 220

Tyr Ala Pro Pro Pro Pro Ala Lys Lys Pro Arg Lys Ser Thr Ala Glu
225 230 235 240

Lys Pro Lys Val Lys Glu Ile Ile Asp Glu Arg Thr Arg Glu Arg Leu
245 250 255

Val Tyr Glu Val Arg Gln Lys Cys Arg Asn Ile Glu Asp Ile Cys Ile
260 265 270

Ser Cys Gly Ser Leu Asn Val Thr Leu Glu His Pro Leu Phe Val Gly
275 280 285

Gly Met Cys Gln Asn Cys Lys Asn Cys Phe Leu Glu Cys Ala Tyr Gln
290 295 300

Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys Thr Ile Cys Cys Gly Gly
305 310 315 320

Arg Glu Val Leu Met Cys Gly Asn Asn Asn Cys Cys Arg Cys Phe Cys
325 330 335

Val Glu Cys Val Asp Leu Leu Val Gly Pro Gly Ala Ala Gln Ala Ala
340 345 350

Ile Lys Glu Asp Pro Trp Asn Cys Tyr Met Cys Gly His Lys Gly Thr
355 360 365

Tyr Gly Leu Leu Arg Arg Arg Glu Asp Trp Pro Ser Arg Leu Gln Met
370 375 380

Phe Phe Ala Asn Asn His Asp Gln Glu Phe Asp Pro Pro Lys Val Tyr
385 390 395 400

Pro Pro Val Pro Ala Glu Lys Arg Lys Pro Ile Arg Val Leu Ser Leu
405 410 415

Phe Asp Gly Ile Ala Thr Gly Leu Leu Val Leu Lys Asp Leu Gly Ile
420 425 430

Gln Val Asp Arg Tyr Ile Ala Ser Glu Val Cys Glu Asp Ser Ile Thr
435 440 445

Val Gly Met Val Arg His Gln Gly Lys Ile Met Tyr Val Gly Asp Val
450 455 460

Arg Ser Val Thr Gln Lys His Ile Gln Glu Trp Gly Pro Phe Asp Leu
465 470 475 480

Val Ile Gly Gly Ser Pro Cys Asn Asp Leu Ser Ile Val Asn Pro Ala
485 490 495

Arg Lys Gly Leu Tyr Glu Gly Thr Gly Arg Leu Phe Phe Glu Phe Tyr
500 505 510

Arg Leu Leu His Asp Ala Arg Pro Lys Glu Gly Asp Asp Arg Pro Phe

515		520		525
Phe Trp Leu Phe Glu Asn Val Val Ala Met Gly Val Ser Asp Lys Arg				
530		535		540
Asp Ile Ser Arg Phe Leu Glu Ser Asn Pro Val Met Ile Asp Ala Lys				
545		550		555
				560
Glu Val Ser Ala Ala His Arg Ala Arg Tyr Phe Trp Gly Asn Leu Pro				
		565		570
				575
Gly Met Asn Arg Pro Leu Ala Ser Thr Val Asn Asp Lys Leu Glu Leu				
		580		585
				590
Gln Glu Cys Leu Glu His Gly Arg Ile Ala Lys Phe Ser Lys Val Arg				
		595		600
				605
Thr Ile Thr Thr Arg Ser Asn Ser Ile Lys Gln Gly Lys Asp Gln His				
		610		615
				620
Phe Pro Val Phe Met Asn Glu Lys Glu Asp Ile Leu Trp Cys Thr Glu				
625		630		635
				640
Met Glu Arg Val Phe Gly Phe Pro Val His Tyr Thr Asp Val Ser Asn				
		645		650
				655
Met Ser Arg Leu Ala Arg Gln Arg Leu Leu Gly Arg Ser Trp Ser Val				
		660		665
				670
Pro Val Ile Arg His Leu Phe Ala Pro Leu Lys Glu Tyr Phe Ala Cys				
		675		680
				685

Val

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<211> 56

<212> DNA

<213> Artificial sequence

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<210> 88

<211> 56

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide primer

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<210> 89

<211> 51

<212> DNA

<213> Artificial sequence

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<212> DNA

<213> Artificial sequence

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<222> (5)..(5)

<223> n represents 5-methylcytosine

<220>

<221> misc_feature

<222> (14)..(14)

<223> n represents 5-methylcytosine

<220>

<221> misc_feature

<222> (25)..(25)

<223> n represents 5-methylcytosine

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30

<210> 92

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<212> DNA

<213> Artificial sequence

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<222> (5)..(5)

<223> n represents 5-methylcytosine

<220>

<221> misc_feature

<222> (16)..(16)

<223> n represents 5-methylcytosine

<220>

<221> misc_feature

<222> (25)..(25)

<223> n represents 5-methylcytosine

<400> 92

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<210> 93

<211> 30

<212> DNA

<213> Artificial sequence

<220>

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<400> 93

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30

<210> 94

<211> 30

<212> DNA

<213> Artificial sequence

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<223> oligonucleotide sequence

<400> 94
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<210> 95

<211> 20

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide primer

<400> 95
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<210> 96

<211> 24

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide primer

<400> 96
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<210> 97

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide primer

<400> 97
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<210> 98

<211> 27

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide primer

<400> 98

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27

<210> 99

<211> 18

<212> DNA

<213> Artificial sequence

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<223> oligonucleotide primer

<400> 99

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<210> 100

<211> 19

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<220>

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<400> 100

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<210> 101

<211> 18

<212> DNA

<213> Artificial sequence

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<400> 101

ctgcaattac cttggctt

18

<210> 102

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide primer

<400> 102

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18

<210> 103

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<213> Artificial sequence

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18

<210> 104

<211> 18

<212> DNA

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<400> 104

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18

<210> 105

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<213> Artificial sequence

<220>

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<400> 105

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18

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19

<210> 107

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19

<210> 108

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<210> 111

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<400> 111

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20

<210> 112

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<213> Artificial sequence

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<223> oligonucleotide primer

<400> 112

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21

<210> 113

<211> 18

<212> DNA

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18

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18

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<212> DNA

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18

<210> 117

<211> 69

<212> DNA

<213> Artificial Sequence

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<223> oligonucleotide probe

<400> 117

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60

tatggcaag

69

<210> 118

<211> 2108

<212> DNA

<213> Mus sp.

<220>

<221> misc_feature

<222> (723) .. (972)

<223> Length of region can vary from 75 to 250 nucleotides

<220>

<221> misc_feature

<222> (723) .. (972)

<223> N can represent any nucleotide: a, t, g, c

<400> 118

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gttacagaat atctccattc agtgcttgac ccagtcacca ctactcagcc atttagcttt      360
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ccttatgg						2108

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<211> 2065

<212> DNA

<213> Homo sapiens

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